



**COMMANDER, U. S. NAVAL FORCES, JAPAN**

**BUSINESS CASE ANALYSIS**

for the

**STRATEGIC UTILITIES INITIATIVE**

Addressing

**U. S. NAVY-OWNED UTILITY SYSTEMS AND  
OPERATIONS IN JAPAN**



Submitted by:

A handwritten signature in black ink, appearing to read "D. H. Orndoff".

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## EXECUTIVE SUMMARY

On 13 November 2001, Commander, Naval Forces, Japan (CNFJ) directed the implementation of the Regional Facility Management System (RFMS). RFMS integrates all facility management capabilities within the Region into a seamless service delivery system with central management and local execution. One of the six business lines identified in RFMS is *Utilities*.

The *Strategic Utilities Initiative* (SUI) is an element of the overall RFMS implementation. This business Case Analysis (BCA) recommends the management solution for the Utilities Business Line of RFMS.

On 11 December 2001, the Deputy Commander chartered the Utilities Business Line Implementation Team (UBLIT) to determine the best design of the Regional Utilities Business Line. In December 2002, the UBLIT completed this “Business Case Analysis (BCA) for the Strategic Utilities Initiative addressing U. S. Navy-owned Utility Systems and Operations in Japan.” The UBLIT carefully worked to understand and document the current utility management situation and to develop four proposed options, assessing both strengths and weaknesses against established evaluation criteria. The UBLIT recommended Option 4, “*Region Fully Leverage Existing PWC Japan Utility Management and Operations Capability.*” The Regional Engineer (RE) reviewed and approved the BCA in January 2003.

The *Regional Commander reviewed and approved the RE recommendation* in February 2003 and briefed it COMPACFLT N46 by video-teleconference on 19 February 2003. The Regional Commander is *now seeking Major Claimant and Navy endorsement* to move forward with this strategic initiative with full implementation beginning in FY05 or FY06.

As an *interim step*, CNFJ has directed implementation of Option 2 “*Region Purchase Regional Utility Management from PWC Japan.*” This interim step allows the Region to realize benefits of a central utility management capability beginning now in FY03. This interim step is also consistent with the desired near term objective to leverage existing utility management capability from PWC Japan. This step is within the Regional Commander’s authority without higher-level review and approval.

The purpose of this BCA is to document the analysis supporting the recommended end-state of full “outsourcing” of utility management and operations to PWC Japan using Navy Working Capital Fund financial management processes.

## Part 1 – CONTEXT, PURPOSE, AND OBJECTIVES

### CONTEXT: REGIONAL FACILITY MANAGEMENT SYSTEM

On 13 November 2001, Commander, Naval Forces, Japan (CNFJ) directed the implementation of the Regional Facility Management System (RFMS). RFMS integrates all facility management capabilities within the Region into a seamless service delivery system with central management and local execution. One of the six business lines identified in RFMS design is “Utilities.”

The *mission* of RFMS is to enable CNFJ to accomplish its base support mission by performing a full range of facility management functions across all U. S. Navy shore activities. The *vision* of RFMS is to deliver “World Class Facility Management Support to Our Forward Deployed Naval Forces.”

The RFMS concept of operations fully integrates all available facility management capabilities into one seamless service delivery system. RFMS centrally (or regionally) manages facility resources through planning, programming, budgeting, and allocation steps. RFMS centrally manages macro program execution. RFMS delivers service through local base teams, a central Hub, and through virtual external (non-Region) capabilities.

### Regional Facility Management System Concept of Operations

- Full **Integration** of All Available Facility Management Capabilities into One Seamless Service Delivery **System**
- Central Planning, Programming, Budgeting
- Central System Execution Management
- Local (Base Teams), Central (Hub), and Virtual (Exterior Region) Service Delivery

RFMS service delivery capability is the integration of facility management talent and resources from three primary sources. The first is “mission funded” capabilities of Commander, U. S. Naval Forces, Japan (CNFJ) and its subordinate shore installations, including Fleet Activities, Yokosuka, Naval Air Facility, Atsugi, Fleet Activities, Sasebo, Fleet Activities, Okinawa, Naval Air Facility, Misawa, and

Navy Support Facility, Diego Garcia. Second is the Navy Working Capital Fund (NWCFF) capability of U. S. Navy Public Works Center, Yokosuka Japan (PWC Japan). Third is the contracting capability of Officer in Charge of Construction, Far East (OICC FE).

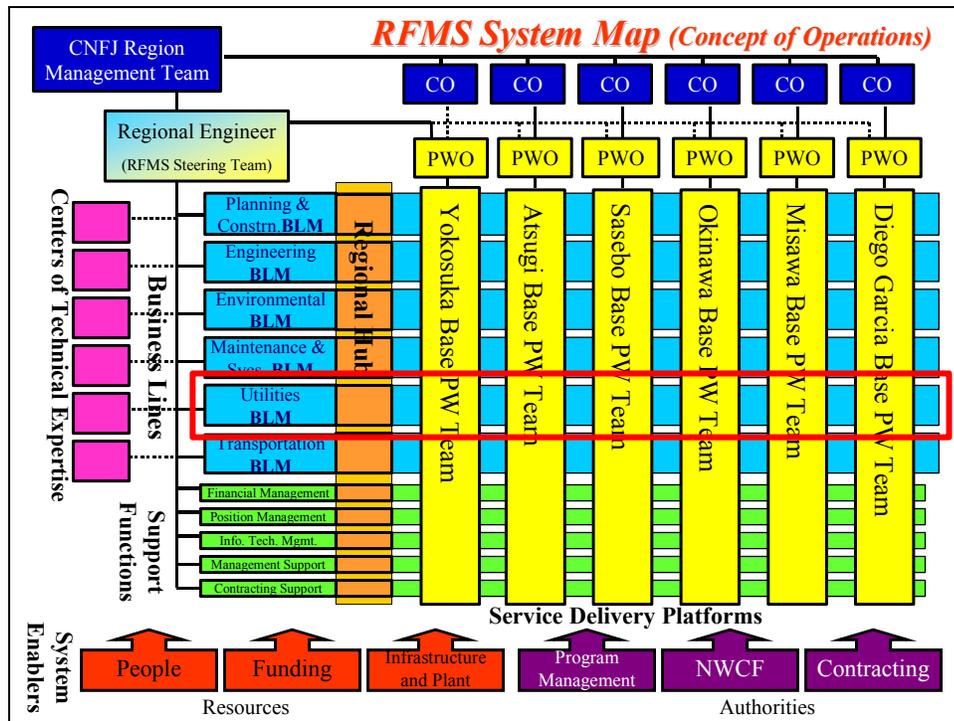
RFMS service delivery is technically support by two “networks” of capability. First is the Naval Facilities Engineering Command (NAVFAC) with the primary interface being Pacific Division, NAVFAC headquartered in Pearl Harbor, Hawaii. NAVFAC provides facility engineering policy, processes, contracting authority, and community management support. Second is the Army Corps of Engineers (COE) with its primary interface being Japan Engineering District (JED). COE provides support for construction planning, design, and on-site construction surveillance for both host nation funded construction and U. S. funded military construction.

RFMS is resourced through two primary senior commands. First is Commander, U. S. Pacific Fleet (COMPACFLT). COMPACFLT provides Navy mission funding for macro funding priorities based on the FDNF war fighter requirements. Second is Commander, U. S. Forces, Japan (COMUSJAPAN). COMUSJAPAN is the primary interface with the Government of Japan (GOJ), and is the conduit for the Navy’s portion of host nation support, which includes support for manpower, construction, utilities, and land.



Continuing with concept of operation, the chart below shows the RFMS System Map. RFMS plans and executes through a “matrix” relationship. The Regional Engineer is the accountable leader of the system. The matrix has six local service delivery platforms called Public Works Teams, shown on the chart as vertical yellow bands. Each Navy shore installation in the CNFJ area of responsibility has a dedicated PWT, led by a Public Works Officer (PWO), who is accountable to both the local Base Commanding Officer and the Regional Engineer. Each PWT is supported by six “business lines,” which are broad functional categories of products and services. Business lines include Planning and

Construction, Engineering, Environmental, Maintenance, Utilities, and Transportation. Each business line is led by a Business Line Manager (BLM), who is accountable to all PWOs as well as the Regional Engineer.



Each Business Line is supported by external (non-Region) “Centers of Technical Expertise (CTE). This is where the RFMS taps into the NAVFAC and COE networks for specialized or surge support requirements.

Also supporting the System are five support functions, including Financial Management, Position Management, Information Technology Management, Management Support, and Contracting Support. Each support function is lead by a Support Function Manager (SFM).

The System is “enabled” by resources and authorities. Resources include people, funding, and infrastructure. Authorities include: (1) Regional designation for program management of the Regional Facilities Management Program, (2) Navy authority delegation to operate a Navy Working Capital Fund financial management operation through PWC Japan, and (3) NAVFAC contracting authority delegation for construction, service, and professional services procurement.

Emphasis on the systems map (red box) has been added to the Utilities Business Line, as this the focus of this business case study.

## REGIONAL COMMANDER’S STRATEGIC INTENT

The redesign of the Utilities Business Line is a subset of the overall design and implementation of RFMS. The Regional Commander, Rear Admiral Robert C. Chaplin, was especially interested in effective and efficient utility management, driven by the following realities:

- a. Utilities consume for over half the shore installation management budget
- b. Effective utility management lowers life cycle cost of utility services
- c. Reliable utilities are critical to base mission readiness.

In October 2000, the “CNFJ Region Strategic Plan 2000,” signed out by RADM Chaplin, directed the establishment of Regional utility financial management processes. (Appendix 1) This action was assigned to his Regional Engineer, then CAPT Mike Donnelly.

In October 2001, RADM Chaplin approved the Regional Facility Management System Strategic Business Plan 2002, which called for the full implementation of RFMS by September 2003, including the Utilities Business Line.

In October 2002, RADM Chaplin approved the RFMS Strategic Plan 2003—2006, which specifically called for completion of RFMS design (Goal 1), the transition of the Utilities Business Line to NWCF (Goal 2), and development of an aggressive energy conservation program for the CNFJ Region (Goal 4). (Appendix 2)

On 11 December 2001, CNFJ established the Utilities Business Line Implementation Team (UBLIT). (Appendix 3) The Team was chartered to evaluate two utility management business models, the current Mission Funded model and the NWCF Business model, and make a recommendation for the Utilities Business Line redesign. The task of the UBLIT was to design a concept of operations that envisions delivery of world-class utility service. Components of the study included consolidation of management, maintenance, and operations of all Navy owned utility infrastructure; sustaining infrastructure across the region; centralizing utility rate management, decentralizing local work execution; analyzing contract versus in-house maintenance; deploying specialized capabilities from a central Hub; and centralizing management of the Government of Japan (GOJ) Utility Cost Sharing (UCS) Program. The Team consisted of a cross section of utility managers, Public Works Officers, and financial managers. (Appendix 4)

The majority of data collection and analysis contained in this BCA is a direct result of the dedicated effort of the Utilities Business Line Implementation Team. The Team used Fiscal Year 2001 as a baseline year, as that was the last full fiscal year of data available when the chartered effort began.

**Utility Privatization.** The Deputy Assistant Secretary of the Navy (Installations and Facilities) *exempted* all utility systems on Department of Navy installations in Japan from the requirements of Defense Reform Initiative Directive #49, Utilities Privatization, per his memorandum to Commander, Naval Facilities Engineering Command dated October 6, 1999. (Appendix 5) Under unique arrangements with our host country, utility systems are not owned by the U. S. Navy, and therefore cannot be privatized as directed by DRID #49. However, the goals of privatization, including obtaining better efficiency and effectiveness by reliance on existing, proven utility providers, is valid and should be part of the ultimate utility management solution for the RFMS Utility Business Line.

**REGIONAL COMMANDER'S STRATEGIC OBJECTIVES:**

After two years of assessing strengths and weaknesses of the existing utility management capabilities within the AOR, the Regional Commander's stated objectives of the Strategic Utility Initiative (SUI) are (1) install a robust regional utility management capability to seize effectiveness and efficiency opportunities; (2) leverage the existing core utility management capability of PWC Japan; and (3) expand the coverage of the NWCF financial management benefits.

**CNFJ Strategic Utility Initiative**  
**Strategic Objectives**



1. Install Robust Regional Utility Management Capability to Seize Both Effectiveness and Efficiency Opportunities
2. Leverage Existing Core Utility Management Capability of PWC Japan
3. Expand the Coverage of Navy Working Capital Fund (NWCF) Financial Management Benefits

Working within this flag-level guidance, the UBLIT focused this Business Case Analysis (BCA) is to determine the most effective and efficient manner to provide utilities operations, maintenance, and management throughout Japan as envisioned by the utilities concept of operations through analysis and evaluation of quantitative and qualitative information.

**STUDY SCOPE**

The UBLIT studied the current mission-funded concept of operations (As Is) at U.S. Naval Air Facility Atsugi (Atsugi), U.S. Naval Air Facility Misawa (Misawa), U.S. Naval Support Facility, Kamiseya (Kamiseya), U.S. Fleet Activities, Sasebo (Sasebo), and U.S. Fleet Activities, Okinawa (Okinawa). The other concepts of operations studied incorporate is the NWCF Business Model employed by U.S. Navy Public Works Center, Japan (PWC Japan) and currently in place at Yokosuka Naval Base. Both of these models incorporate an upper tier of management called the "Business Line Manager" (BLM) who is part of the Regional Facility Management Team.

The BLM is an integrated component of the CNFJ Region with responsibilities for innovation, technical expertise, centralized management of certain functions and processes, and establishment of common business practices. The composition of the BLM Team includes the Business Line Manager, the Regional Utilities Engineer, and the Regional Energy Manager. The Utilities Division/Branch Director is, and will remain, the senior individual at each base who performs utilities management on a full-time basis. Under a matrix organization concept, these individuals will work for the Public Works Officer (PWO) and with the BLM.

## **STUDY METHODOLOGY**

The UBLIT collected numerous and varied information such as financial costs of operations and maintenance, purchased utility amounts, GOJ UCS refunds, reimbursable customers and amounts collected, and financial management and administration procedures; property information associated with utility facilities, plants, and equipment; staffing and organizational charts; contracts for utilities operations and maintenance; system descriptions, operations and maintenance processes including planning and execution; engineering maps, charts, and drawings; energy management; report and data call preparation and submission; material ordering procedures; current and future challenges related to capacity requirements, distribution, personnel, funding issues; task matrix and organizational assignment. The UBLIT gathered most of the information between January and April 2002 and annual figures such as funding and costs were from FY01.

The UBLIT evaluated information and held numerous discussions with various personnel regarding clarification of the information provided as well as assignment of functions and tasks performed. They concentrated efforts at Atsugi, Kamiseya, and Sasebo because these activities serve as host commands and provide utility services in support of its own mission and in support of its tenants' missions.

The Regional Engineer periodically gave the Regional Commander, the Regional Staff, Base Commanding Officers, and Base Public Works Officers progress reports on the UBLIT findings, analysis, and preliminary conclusions.

## Part 2 – SCOPE OF THE UTILITY MISSION

This section of the BCA defines the scope of the U. S. Navy utility mission for the CNFJ Region.

For the purposes of this study, the scope is defined as *all U. S. Navy owned utility systems and operations in Japan*. This study excludes the utility systems and operations at Navy Support Facility Diego Garcia. NSF Diego Garcia is under the Region and RFMS. Diego Garcia presents a unique utility management scenario, with on-island utility generation, omnibus Base Operating Support Contract (BOSC), and other factors. The Regional Engineer will integrate DG facility management as a second RFMS implementation phase following initial RFMS stand up.

**Categories of Utility Services.** U. S. Navy owned utility systems in Japan include electrical power (including both 50hz and 60hz frequency), steam power, potable water, sewage disposal, non-potable water for fire protection, compressed air, natural gas, and demineralized water. The chart below shows which utility services are provided at the five U. S. Navy bases in Japan.

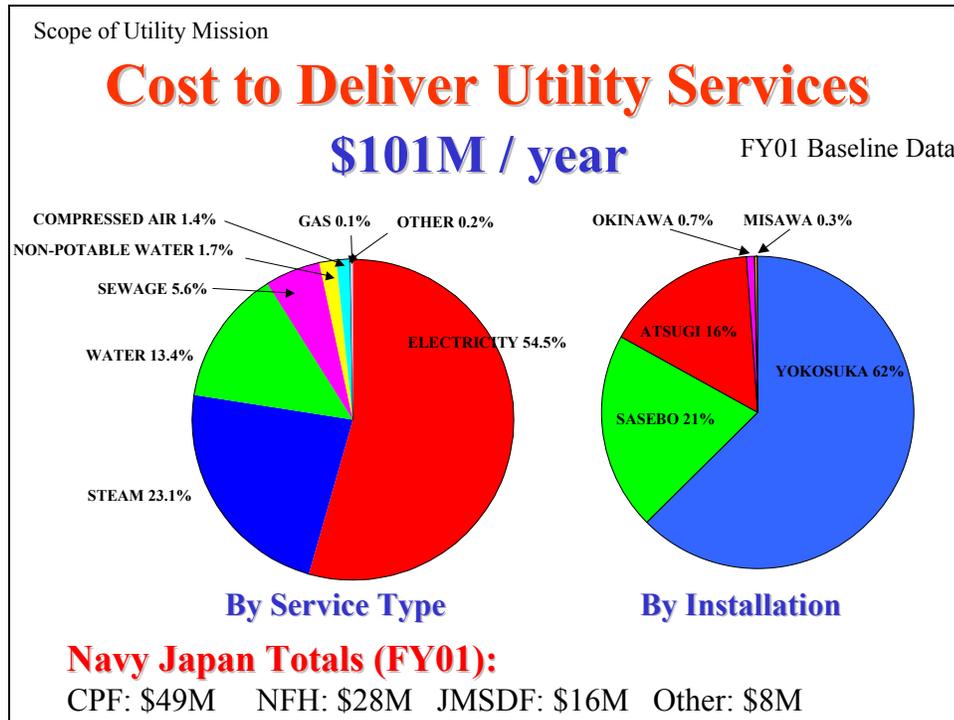
Service	Installation				
	Yokosuka	Atsugi	Sasebo	Okinawa	Misawa
Electrical Power	✓	✓	✓	✓	✓
Steam	✓	✓	✓		✓
Potable Water	✓	✓	✓	✓	✓
Sewage	✓	✓	✓	✓	✓
Non-potable Water	✓		✓		
Compressed Air	✓		✓		
Natural Gas			✓		
Other	✓		✓		

FY01 Baseline Data

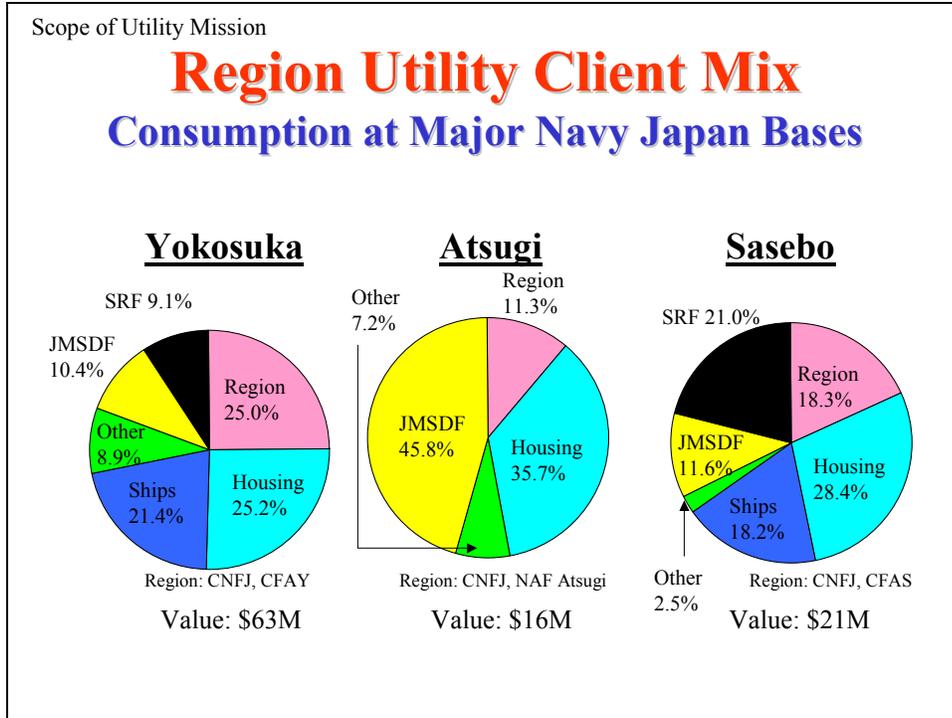
The Navy is the utilities services provider at Yokosuka, Atsugi (including Kamiseya), and Sasebo. On Okinawa, the Fleet Activities Okinawa provides utilities services at White Beach and purchases utilities through the Air Force at Kadena Air Base. NAF Misawa purchases utilities services from the Air Force at Misawa Air Base. Fleet Industrial and Supply Center (FISC) Yokosuka purchases utility services directly from the private utility provider at Hachinohe Fuel Depot, located some 10 miles from Misawa AB.

**Overall Cost of Utility Services.** The overall cost of utility services exceeds \$100M per year for U. S. Navy bases in Japan. The chart below shows data collected for FY01, our baseline year, showing cost by service type and by Japan base.

Electrical power is by far the most expensive utility commodity, accounting for over 54% of the total cost, or about \$54M. Fleet Activities Yokosuka is by far the most utility intensive base, driving 62% of total utility cost. From a client perspective, COMPACFLT (including Bases, Ship Repair Facilities, and Ship utilities) pays almost half (49%) of the total cost, followed by Navy Family Housing at 28%, Japanese Maritime Self Defense Force (JMSDF) tenants consuming about 16%, and all other tenants driving about 8% of the total cost.



**Client Mix.** The chart below shows the client mix for our three major Navy bases, shown by percentage of total consumption. The three major Navy geographic locations (Yokosuka, Atsugi, and Sasebo) collectively received revenues of \$100 million, including the GOJ UCS refund. Family housing is the largest DOD consumer of utilities paying about \$27.5 million in FY01, followed by CNFJ at \$21.4 million. The Japanese Maritime Self-Defense Force (JMSDF) is co-located at all bases and pays the higher non-DOD private rate.



**Utility Cost Drivers.** In the spirit of Activity Based Costing (ABC) and Activity Based Management (ABM), it is important to understand cost drivers and cost components. Components of the total cost to deliver utilities, or cost drivers, are shown below. Costs are categorized as either controllable or not controllable.

**Controllable costs** include the volume of consumption; amount of Sustainment, Restoration, Modernization (SRM) investment; efficiency of operations; size and type of workforce; level of support contracts; support from overhead; and back-up/redundancy capacity. For example, an aggressive energy conservation program will lower consumption and therefore lower overall utility cost.

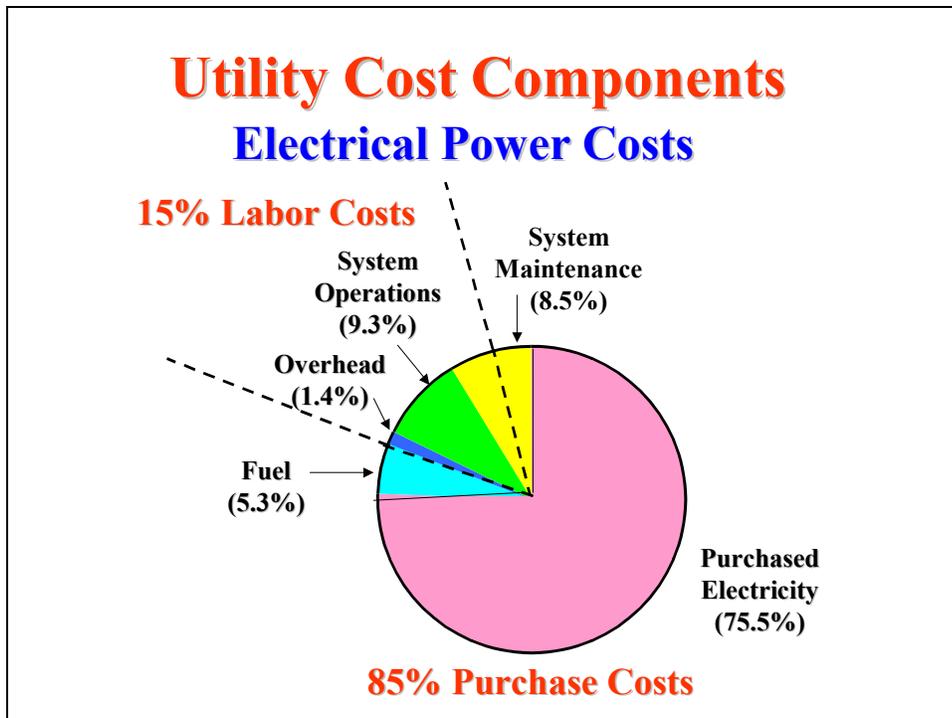
**Not controllable costs** include U.S. dollar to Japanese yen currency exchange rate; cost of purchased utilities; amount of the Government of Japan (GOJ) Utility Cost Sharing (UCS) refund; cost of purchased fuel, and rate of inflation. It is important to understand many utility cost drivers are not controllable by utility managers. On the other hand, utility cost should not be seen as a monolithic “must pay” bill. Significant savings can be realized through efficient utility operations and energy conservation.

Scope of the Utility Mission

## Utility Cost Drivers

- **Controllable**
  - Volume of Consumption
  - Volume of SRM Investment
  - Efficiency of Operations
  - Size/Type of Workforce
  - Level of Support Contracts
  - Supporting Overhead
  - Back-up, Redundancy
- **Uncontrollable**
  - Currency Exchange Rate
  - Cost of Purchased Utilities
  - Amount of GOJ Utility Subsidy
  - Cost of Purchased Fuel
  - Inflation

**Utility Cost Components.** The chart below shows the cost components of electrical power, as a representative example.



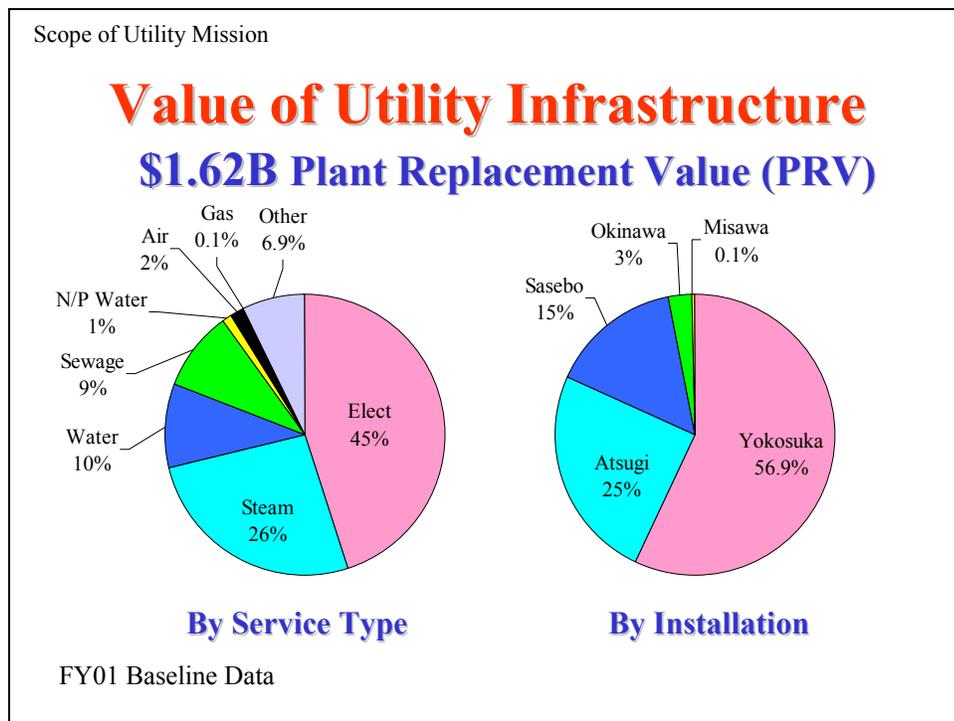
A full 85% of the cost of electrical power is currently a purchased cost, with little opportunity for savings. The vast majority of the purchase cost is paying established commercial utility rates for

purchased utility power. While rates can be improved around the margins through load peak shaving and other commercial utility incentives, commercially purchased utilities is essentially a “fixed” cost.

The remaining 15% of the total cost is labor cost, used to operate, maintain, and manage the utility service delivery system. Improved business processes and operations efficiencies can squeeze limited savings in labor expenditures.

**Utility Cost Sharing (UCS) Program.** The Government of Japan UCS program is part of the Special Measures Agreement (SMA), a bi-lateral agreement between the U.S. Government and the GOJ, that stipulates that Japan will bear a “part or all” of the cost of yen purchased utilities. The GOJ UCS funds received are considered “refunds” for credit to the operating budgets of Navy activities, vice reimbursements. Currently the GOJ refunds about 85% of the total cost of commercially purchased utilities. UCS does not cover any of the cost to distribute utilities throughout the base complexes, generate power, including 60hz electrical power not available from local commercial sources, or manage utility service delivery. The SMA is renegotiated every five years, at which time the level of funding support can be changed.

**Value of Utility Infrastructure.** The overall present replacement value (PRV) of the Navy owned utility infrastructure in Japan is \$1.62B. The chart below breaks out the infrastructure value by service type and by installation. From the system perspective, electrical and steam systems account for almost 75% of the plant value, or \$1.1B. From the installation perspective, Fleet Activities Yokosuka, our largest industrial complex, accounts for almost 60% of the plant value, or \$922M.



**Current Utility System Readiness.** The following chart shows the Regional Utility Business Line Manager’s macro assessment of utility system readiness. This macro assessment is based on the overall age and material condition of systems. Because utility readiness is critical for base mission

readiness, an overall readiness condition of C1 (fully mission ready) or C2 (substantially mission ready) is our readiness objective. The biggest problems are at the Kamiseya facility near NAF Atsugi, Urago Weapons Storage area near Yokosuka Base, and the satellite FISC Fuel Depots. The best mission ready locations are on Yokosuka Base (maintained by PWC Japan) and Sasebo Base (maintained by PW Team Sasebo).

Current Situation (As Is)

### Current System Readiness

	Yokosuka				Atsugi		Sasebo		Okina- nawa	Misa- wa
	Main Base	HSG Ikego Negishi	Urago Strg.	Fuel Depot	Main Base	Kami seya	Main Base	Fuel Depot	Awase W.Beach Tengan.P	Fuel Depot
<b>BLM Assess</b>	<b>C1</b>	<b>C2</b>	<b>C3</b>	<b>C3</b>	<b>C2</b>	<b>C3</b>	<b>C1</b>	<b>C2</b>	<b>C2</b>	<b>C3</b>

Source: BLM Assessment  
IRRS does not reflect accurate deficiency data.

**Current Operational Model.** The following chart shows the current operational model for utility management and utility service delivery. There is a wide variation of execution methods across the Region, resulting from evolutionary develop of each base operating independently with essentially no central management or control.

## Current Operational Model

- **Region:**
  - No Staff Dedicated to Regional Utility Management
  - Utility Management Primarily Performed at Base Level
- **Yokosuka:**
  - Mostly NWCF (PWC) with Some Mission Funded Systems
  - Mostly In-house MLC Workforce
- **Atsugi:**
  - All Mission Funded Systems
  - Mostly In-house MLC Workforce, Some Military
- **Sasebo:**
  - All Mission Funded Systems
  - Mostly Contracted Effort, Some In-house MLC Workforce
- **Okinawa:**
  - Partly Mission Funded Systems, Partly Air Force Owned
  - Small In-house Workforce, Effort Mostly Outsourced to Air Force
- **Misawa:**
  - Small Mission Funded System at Hachinohe
  - No In-house Workforce, Effort Mostly Outsourced to Air Force

In Yokosuka, the NWCF business model is employed by PWC Japan and currently supports only the Yokosuka Base within the Regional Utilities Business Line. The NWCF business model is a business management and operations structure whereby the entity uses its funds to finance operations between the time of work commencement and the time the customer pays. This model is built on the premise that there is a “buyer” and “seller” relationship wherein the NWCF activity contractually agrees to perform work and the customer agrees to pay for that work.

The UBLIT collected a great deal of data that documents the operational information available for the baseline year of Fiscal Year 2001. Information includes:

- Schematic of FY01 Operating Result for Atsugi and Sasebo (Appendix 6)
- FY01 Electrical Consumption and Cost by Base and Customer (Appendix 7)
- Cost Study for Sasebo Utilities O&M Contract Conversion (Appendix 8)
- Current Task Matrix, NAF Atsugi (FY01) (Appendix 9)
- Current Task Matrix, CFA Sasebo (FY01) (Appendix 10)
- Utility System Operations and Maintenance Matrix, NAF Atsugi (Appendix 11)
- Utility System Operations and Maintenance Matrix, CFA Sasebo (Appendix 12)
- Non-utility Support of Utility Operations, NAF Atsugi (Appendix 13)
- Non-utility Support of Utility Operations, CFA Sasebo (Appendix 14)
- Sustainment and Recapitalization Opportunities, NAF Atsugi (Appendix 15)
- Sustainment and Recapitalization Opportunities, CFA Sasebo (Appendix 16)

Atsugi, Kamiseya, Sasebo, Misawa, and Okinawa are mission-funded activities that receive O&MN funding annually from CNFJ. The mission-funded organizational structures at Atsugi, Kamiseya, and Sasebo are very integrated and interrelated. That is, the utilities division/branch receives support from other divisions/branches within its respective Public Works Department (PWD). This integration and interrelationship is the typical PWD model. Although Misawa and Okinawa have PWDs, each activity

resides predominately on an Air Force base that provides utility services. The O&MN appropriations for mission-funded activities earmark funding for specific purposes and have a one-year period of time by which it must be used (obligated).

Atsugi's Utilities Division operates and performs daily maintenance and preventive maintenance inspections (PMIs) on the utility plants. Contractors perform major electrical distribution and substation PMIs and all other major repairs and projects.

Kamiseya's Utilities Branch operates and performs minimum or breakdown maintenance on its utility plants.

At Sasebo, a contractor performs the general operations and maintenance of the utilities plants and systems. Maintenance responsibilities include PMI, emergency/service work and corrective maintenance not to exceed 16 hours and \$400. The contractor may also perform minor work (not to exceed ¥300,000) when authorized by Sasebo. Sasebo Production Branch personnel accomplish minor work not authorized for contractor performance, work that costs over ¥300,000, and recurring maintenance that are relatively major in scope, such as annual boiler maintenance. Other contractors perform many critical one-time repairs; repairs that require specialized technical skills, equipment, and systems; and non-availability of Sasebo Production Branch personnel dictated by workload.

Sasebo's Utilities Branch provides overall management and support such as budget input, report preparation, data call responses, record keeping, coordination of utility outages, engineering support, and preparation of work requests to initiate work orders. Sasebo's responsibilities for the fuel terminals are limited to the switching station and boiler plant at Akasaki.

Misawa and Okinawa receive all of its utility support from its Air Force host. White Beach, Okinawa provides electricity, potable water, and sewage service to visiting ships on a reimbursable basis.

CNFJ Region is responsible for utility systems at satellite fuel depots operated by U.S. Fleet Industrial Supply Center (FISC) Yokosuka in Yokosuka, Sasebo and Misawa sub-regions. This responsibility began in 1998 after Installation Claimant Consolidation. These systems have been effectively in "break-down" maintenance status since the transfer.

**Utilities Business Line Staffing.** The following chart shows the approved current (FY01 baseline) staffing for the Utilities Business Line, totaling 249 positions.

**Current Utilities Staffing**  
(End-Strength) FY01 Baseline Data

	<b>MLC</b>	<b>USCS</b>	<b>Military</b>	<b>Total</b>
<b>Yokosuka</b> <sup>1</sup>	181	1	0	182
<b>Atsugi</b>	39	1	2	42
<b>Kamiseya</b>	4	0	9	13
<b>Sasebo</b>	8	0	0	8
<b>Okinawa</b>	1	0	3	4
<b>Misawa</b>	0	0	0	0
<b>All Japan</b>	233	2	14	249

<sup>1</sup> Navy Working Capital Fund Billets

Japanese civilian employees working for the Government of Japan (GOJ) under a “Master Labor Contract” (MLC) are the predominant workforce at Yokosuka (PWC Japan positions) and Atsugi (Region positions).

U.S. Civil Service (USCS) incumbents serve in management positions, including Utilities BLM and Head of the Utilities Division at NAF Atsugi.

Sasebo’s utility operations and maintenance is primarily contractor operated, with a small MLC staff to provide contract oversight and to coordinate with other Base functions.

All Yokosuka staffing is resourced through NWCF utility rates. All non-military staffing at all other Japan locations is resourced through Region mission funding for labor end strength.

All military staffing is resourced by Military Personnel, Navy funding. Navy enlisted personnel (SEABEES) are used in system operations and maintenance at Atsugi, Kamiseya, and Okinawa.

## **Part 3 – A CASE FOR CHANGE: CHALLENGES AND OPPORTUNITIES**

Part 3 of this BCA makes the case for needed change. Following is a discussion of five major “challenge” areas inherent in the existing (as is) CNFJ Region utilities management operational model. After each challenge area, the corresponding “opportunity” is discussed.

### **Challenge: Decentralized Utility Management.**

The current CNFJ Region utility management model is decentralized and managed predominately at the installation level. There are no Regional positions dedicated to Regional utility management. As the current situation has evolved over time without central control, there is a wide variation of approaches and methods to locally manage utility operations and service delivery.

The following chart summarizes the recognized weaknesses of the current decentralized management model, from the Region, Fleet, and Navy perspectives.

The Region collectively is very inconsistent in its utility management processes, making it difficult to assess performance, prioritize resource allocation, employ “best in class” business tools and methods, and communicate consistently with Regional clients.

The Region has difficulty identifying and seizing cost savings opportunities without meaningful engagement in understanding requirements and assessing alternatives. Installations tend to resist efficiency improvements, since it reduces local flexibility, requires transition effort to implement, and often requires up-front investment.

The current base centric Region model does not fully leverage the core utility management capability of Public Works Center Japan. PWC Japan has built a critical mass of utility management capability backed by corporate NAVFACENGCOCOM systems command technical support. PWC Japan currently provides effective, proven utility management for over 60% of the total Region utility mission. The Region would benefit by leveraging, not duplicating, this existing core utility management capability.

Utility management requires sophisticated financial management processes to accommodate a with diverse customer base, set accurate rates, manage host nation utility subsidies, effectively manage cash flow challenges, and target appropriate sustainment and recapitalization levels. The Navy Working Capital Fund financial management processes are designed to support this kind of complexity. The current mission funded system for Atsugi and Sasebo generates Region financial management challenges and inconsistencies. Currently, over 60% of the Region’s utility mission is managed under NWCF financial processes.

Today there is no integrated Regional investment strategy for utility systems. The base centric approach to investment creates a wide variety of investment levels. Many critical infrastructure investments are deferred indefinitely to link up with proposed host nation construction projects. Often known serious system vulnerabilities are not addressed waiting for external resourcing. Mission

funded systems require major claimant “special project” funding for large sustainment or repair projects. Special project funding has been limited and unpredictable in recent years as COMPACFLT has diverted this funding to other pressing Fleet requirements.

Mission funding of utility systems and operations creates complicated and inefficient funds flow. The Region must deal with many reimbursable tenants and private parties consuming utilities on our bases. Different categories of funding are required for utility purchases and sustainment. Host Nation Utility Cost Sharing (UCS) funding, distributed quarterly after consumption, is not in sync with monthly billing from commercial utility providers. Cash flow problems necessitate advance funding and temporary over-funding scenarios for both Region and tenant commands. This scenario requires frequent reconciliation of accounts to juggle cash flow challenges, effort that is administration intensive and creates no value for utility consumers.

A major concern is Region bases allocate utility cost differently, creating wide variation, confusion, and, in some cases, over-charging of tenant commands. Some DoD tenants with operations at several Japan bases can see dramatic variation in cost allocation methodology.

## **Current Utility Management Model (Decentralized, Base-centric)**

- Weaknesses (from Region Perspective):
  - Inconsistent Management Processes
  - Difficult to Seize Savings Opportunities
  - Does Not Fully Leverage PWC Japan Core Utility Management Capabilities
  - Does Not Fully Leverage NWCF Financial Management Advantages
    - Two Different Business Models (60% NWCF, 40% MF)
  - No Integrated Investment Strategy
  - Complicated and Inefficient Funds Flow
  - Wide Variation in Cost Allocation Methods
  - Cash Flow Issues with Timing of Host Nation Funding

### **Opportunity: Leverage Existing PWC Japan Utility Management Capability.**

CNFJ can better manage utilities by moving towards the three stated Strategic Utilities Initiative objects:

- a. install robust Regional utility management capability to seize efficiency and effectiveness opportunities
- b. leverage existing core utility management capability of PWC Japan
- c. expand the coverage of the Navy Working Capital Fund financial management benefits across all U. S. Navy Japan bases.

Leveraging existing PWC Japan capability would result in greater utility mission effectiveness, efficiency, and accountability. The following chart shows how PWC Japan performs against these important performance and cost metrics.

## PWC Japan Core Utility Management Capability

- Effective:
  - Most Reliable Utility Systems in AOR
  - Managed by Team of Senior Utility Professionals
  - Technically Backed by NAVFAC PWC Corporation
  - Mature, Proven Business Processes
- Efficient:
  - Lowest Unit Cost in AOR
  - Historical Track Record for Effective Cost Control and Stabilized Rates
- Accountable:
  - CO Reports Directly to CNFJ
  - Full Cost Visibility, Published Financial Results

### **Challenge: Increasing Energy Consumption.**

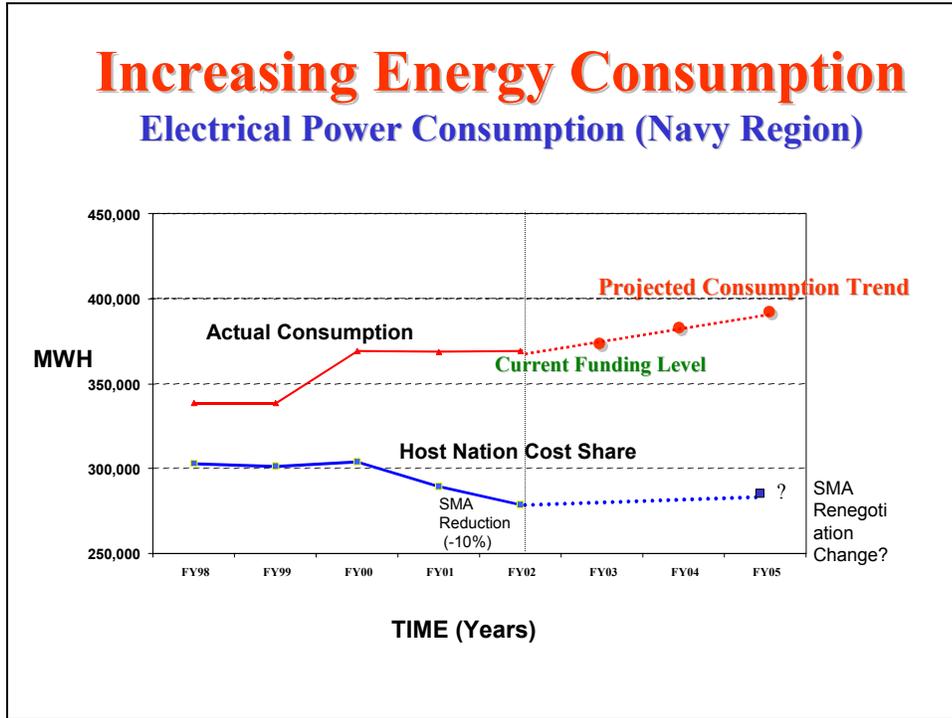
Based on historical trends, the Japan Region faces two utility challenges. The first is increasing consumption trend of utilities. This increasing trend is caused by:

- a. Continuing mission growth and increasing personnel loading (30% increase over last 15 years)
- b. Corresponding major host nation funded construction program, constructing on average over \$150M worth of new facilities per year for last 10 years
- c. Minimal investment in energy conservation, due in large part to the perception that host nation support covered most, if not all, of the total cost of utility consumption.

While the consumption trend is rising, host nation funding support for utility consumption has been reduced. . The current Special Measures Agreement (SMA), which determines the level of host nation support for utilities, reflects a 10 percent reduction of utility cost sharing (UCS) program from the previous SMA. As the Japanese economy continues to struggle, there is a real possibility that the Government of Japan (GOJ) will reduce the UCS contribution during the negotiation of the next Special Measures Agreement (SMA) in 2006.

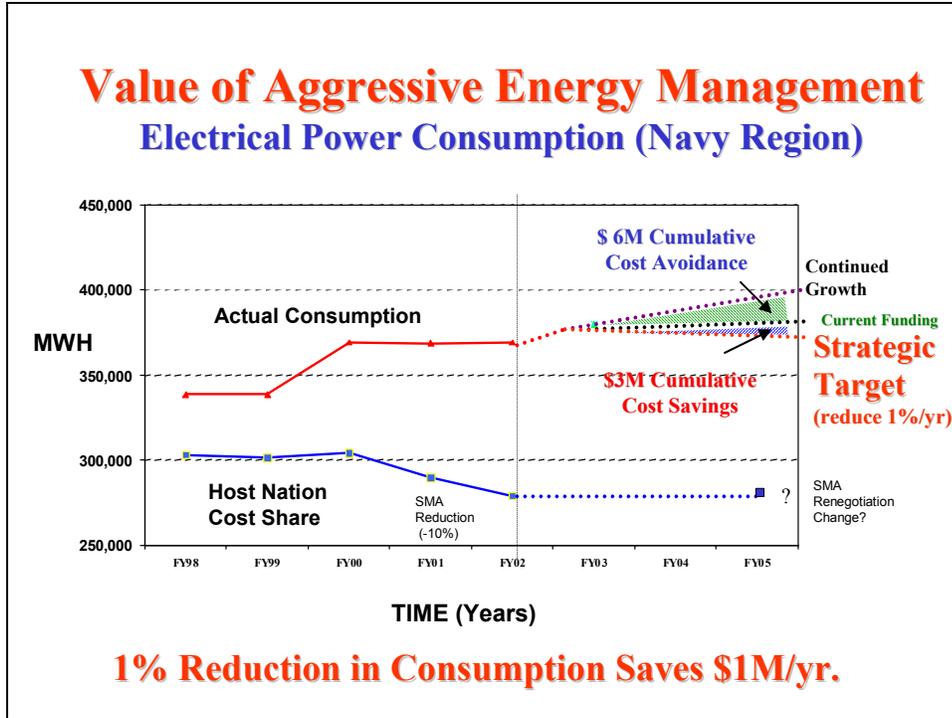
The U. S. Navy energy consumption above the levels subsidized by host nation funding is the *most expensive utility cost paid by the Navy anywhere in the world*. The divergent trend lines shown on

the chart, if left unchecked, will dramatically drive up the cost of utilities paid by the U. S. Navy in Japan.



**Opportunity: Aggressive Energy Management.**

The following chart illustrates the cumulative cost savings that could accrue through aggressive energy management of electrical consumption. For example, a one percent reduction through energy conservation would result in cumulative cost savings of about \$3 million from FY03 through FY05 from current funding levels. However, if left unfettered and based on historical increases in consumption, CNFJ will incur cumulative additional cost of about \$6 million from FY03 through FY05 from current funding levels.



To be successful in reducing energy consumption, the Region must put in place the key enablers, including:

- a. Regional strategic focus (identify energy conservation as one of a “vital few” issues for leadership to concentrate management attention)
- b. Engaged accountable leadership, both at Region and Installations
- c. Regional Energy Policy Board, to focus and prioritize efforts
- d. Employ full time energy management specialist talent, to ensure opportunities are identified and executable plans and projects are developed.

With the enablers in place, targeted investments of management attention and resources can be made to realize relatively fast return on investment. The following chart lists the enablers and identifies where these investments should be made.

## Strategy to Reduce Energy Use

- Enablers:
  - CNFJ Strategic Focus
  - Engaged, Accountable Leadership
  - Regional Energy Policy Board
  - Full Time Energy Management Specialist
- Investments:
  - Mandated User Conservation\*
  - Aggressive Space Mgmt.\*
    - Function Consolidations
    - Demolition of Old Facilities
  - Energy Efficient Building Systems\*\*
    - Thermal Insulation
    - Doors/Windows
    - Lighting and Lighting Controls
    - EMCS Controls for Larger Facilities
  - Distribution Improvements\*\*
    - Metering Big Energy Users
    - Co-Generation Plant in Yokosuka
    - Load Monitoring and Peak Shaving
    - Thermal Imaging for Line Loss



\* Base CO Lead  
\*\* RE Lead

### Challenge: No Integrated Plant Sustainment Strategy.

The UBLIT identified recapitalization opportunities for Atsugi and Sasebo that would contribute towards long-term savings and a more efficient and reliable system (Appendixes 15 and 16). In general, Atsugi and Sasebo personnel are aware of these areas of recapitalization opportunities. However, funding constraints are a major reason for not timely accomplishing such projects as evidenced in the low sustainment, restoration, and modernization (SRM) expenditure as a percentage of present replacement value (PRV) of the utility infrastructure. For example, Atsugi has identified a requirement for remote monitoring of its boilers at a cost of about \$550,000. By doing so, Atsugi would be able to redistribute its workforce to perform other required tasks, or reduce staffing. The project, which has a relatively short-term return on investment (ROI), has not been executed due to lack of funding priority.

A mission funded O&MN activity has to carefully weigh and prioritize its unanticipated requirements because there is no assurance that its chain of command has funds available to support new, unbudgeted requirements. Historically, the paucity of the O&MN appropriation has generally resulted in shore commanders carefully weighing direct support requirements against indirect fleet support, often resulting in “deferrals” of important support requirements.

The following chart shows how, in the FY01 baseline year, different installations showed *dramatically different levels of sustainment funding*. During the baseline Fiscal Year 2001, *no major claimant Special Project funding* was allocated for utility sustainment and repair. The “industry standard” is about 1.5% of PRV for sustainment investment to optimally reduce life cycle cost of expensive utility infrastructure.

**Current Plant Sustainment (\$M)**  
**(No Integrated Regional Investment Strategy)**

	Region Investment	CPF Investment	Navy <sup>(Total)</sup> Investment	Navy Utility PRV	% PRV
Yokosuka	11.4M	N/A	11.4M	922.1M	<b>1.2%</b>
Atsugi	1.3M	0	1.3M	399.3M	<b>0.3%</b>
Sasebo	1.5M	0	1.5M	249.4M	<b>0.6%</b>
Okinawa	0	0	0	46.2M	<b>0%</b>
Misawa	0	0	0	2.9M	<b>0%</b>
All Japan	14.2M	0	14.2M	1619.9M	<b>0.9%</b>

FY01 Baseline Data                      Industry Sustainment Target is **1.5%** of PRV

**Opportunity: Regional Sustainment Investment Strategy.**

The Region must develop an integrated, Region-wide investment strategy that covers all Navy-owned utility systems. The strategy must consider mission criticality, system vulnerabilities, and readiness impacts.

The goal is to ensure all sustainment funding is targeted at the requirements that will deliver the *greatest readiness return on investment*. The sustainment objective is to *achieve and/or maintain C1/C2 mission readiness for all mission critical utility systems*. The following chart shows the gameplan for improved utility system reliability and improved readiness ROI.

## Improved System Reliability and ROI

- Region-wide Plant Investment Strategy
  - Includes All Navy-owned Facilities
- Develop **Integrated Sustainment Plan** Based on:
  - Mission Criticality and Vulnerability
  - Impact on Mission Readiness
- Invest Within **Strategic Capitalization Funding Targets**
  - IPL for Maximum ROI
  - Aggressive Use of FIP to Modernize
  - Plant Automation to Save Labor
  - Minimize System Infrastructure Where Possible
- **Objective: Achieve and Maintain C1/C2 Readiness for All Mission Critical Systems**

The NWCF business model provides funding flexibility and is not as rigid as the annual O&MN appropriation. For example, funding for emergent and exigent situations under NWCF does not necessarily have to occur at the expense of other programs. Since the NWCF entity is able to sustain unplanned losses, it can recover such expenses in future year rates.

Due largely in part to its ability to use the NWCF and effective use of the Host Nation Facilities Improvement Program, PWC Japan is able to maintain the Yokosuka utility infrastructure at a higher level than the other bases in Japan. Combining the infrastructure of Atsugi, Kamiseya, Sasebo, Okinawa, Misawa, and PWC Japan creates a resource pool and synergism that allows flexibility in applying funds to those areas most in need throughout the Region, rather than at a single location. Even at current funding levels, prudent and judicious planning and application of funding will enhance system operability and reliability.

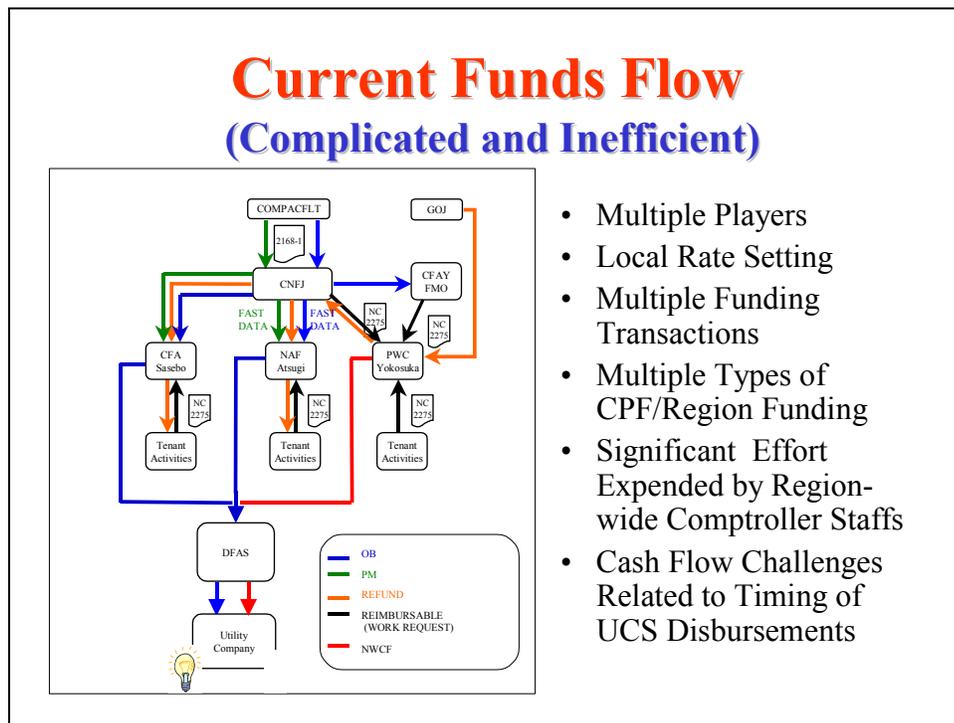
During the transition, the UBLIT recommends capping the utility infrastructure investment at its current level. Mission criticality and readiness will be the basis for distributing the infrastructure investment. Ultimately, the goal is to have a consistent utility readiness level throughout the Region at C1/C2 readiness.

The Regional Utilities Business Line Manager (BLM) position provides for a strategic focus through regional planning, oversight, and centralized management of the utilities infrastructure. As the regional manager, the BLM who has the ability to target recapitalization efforts based more on mission criticality and readiness rather than availability of funds. The BLM can also redirect resources across the Region to address system casualties. The BLM has the ability to identify and eliminate redundant overhead functions and procedures and, using best business practices, can improve the effectiveness and efficiency of the utility operations.

The UBLIT has identified recapitalization opportunities for Atsugi and Sasebo that would contribute towards long-term savings and a more efficient, effective, and reliable system. For the most part, Atsugi and Sasebo personnel are aware of these areas of opportunities. However, funding constraint is a major reason for not timely accomplishing such projects. The UBLIT believes that the NWCF business model can allow prudent investment in these validated, short-term ROI projects.

**Challenge: Complicated and Inefficient Funds Flow.**

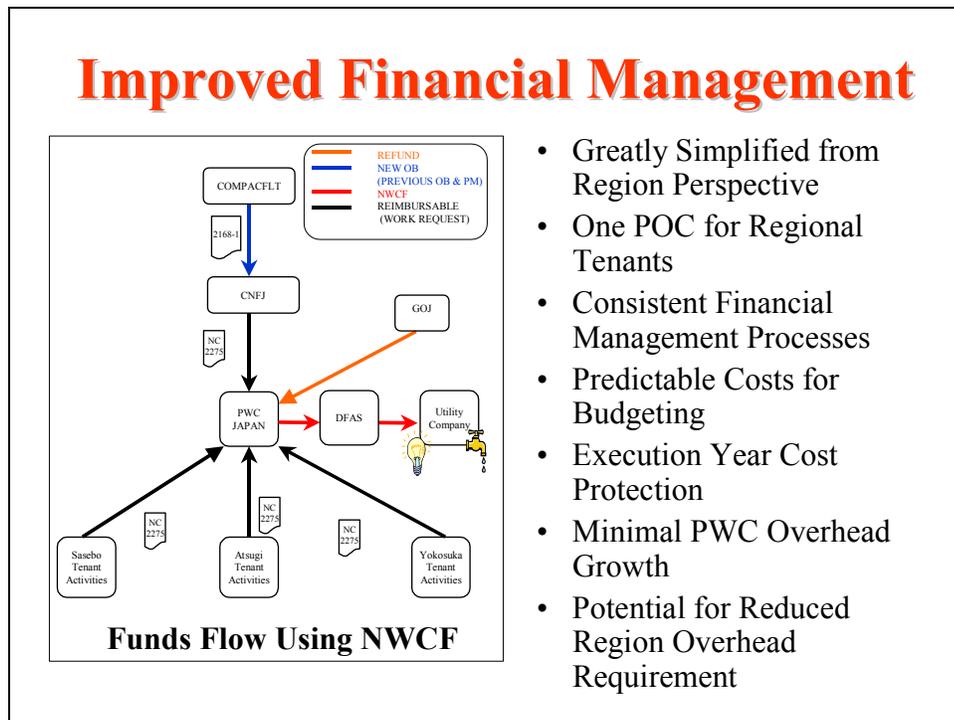
The current mission-funded “As Is” utilities funds flow process for funds administration, reimbursable management, and GOJ UCS refund distribution is cumbersome, convoluted, and requires many financial transactions. The causes of this situation are more the result of the statutory regulation governing O&MN funds and administration of the GOJ UCS refund within the O&MN framework. The chart below graphically illustrates the current process more clearly than words can describe. The salient points are: many touch points, multiple transactions, process masks visibility of all utility costs, involvement by multiple installation Public Works and Base Comptroller personnel.



- Multiple Players
- Local Rate Setting
- Multiple Funding Transactions
- Multiple Types of CPF/Region Funding
- Significant Effort Expended by Region-wide Comptroller Staffs
- Cash Flow Challenges Related to Timing of UCS Disbursements

**Opportunity: Improved Financial Management Through NWCF Business Model.**

By moving all Navy-owned utilities to the NWCF, financial management is greatly simplified and much more efficient, especially from the Region perspective. The majority of the financial management effort transfers to PWC Japan, who leverages existing, proven NWCF financial management capability and business processes without additional staffing. This streamlining of Region financial management requirements should allow personnel savings or reinvestment opportunities. The chart below shows how utilities financial management could be greatly simplified.



The NWCF business model is a business management and operations structure whereby the entity uses its funds to finance operations between the time of work commencement and the time the customer pays. This model is built on the premise that there is a “buyer” and “seller” relationship wherein the NWCF activity contractually agrees to perform work and the customer agrees to pay for that work. The NWCF business model is employed by PWC Japan and currently supports only the Yokosuka Base within the Regional Utilities Business Line.

Aside from greatly simplifying financial management from the Region perspective, the Navy Working Capital Fund (NWCF) business model employed by PWC Japan bring many other advantages to Region utility managers. These distinct advantages are enjoyed by the current 60% of the utility mission currently supported by PWC Japan in Yokosuka. The following chart outlines the financial benefits of the NWCF for utility managers.

## NWCF Financial Management Advantages

- Protects Region from Unbudgeted Expenses in Execution Year
  - Losses and Gains Reconciled in Future Year Rates
- Eliminates Monthly Cash Flow Problems
  - NWCF Corpus Covers UCS Funding Lag
- Spreads Required Overhead Proportionately to All Clients
- Invests Needed Resources for Plant Sustainment and Readiness
- Provides Full Cost Visibility
  - Allows Informed ABC/M Decisions
- Aggressively Manages and Controls Cost in Execution Year
  - Fully Accountable for Financial Results (NOR and AOR Visibility)
- Facilitates Better Investment Planning
  - Inherent Part of NWCF Budget Development

**Region Protected from Unbudgeted Expenses in Execution Year.** This aspect of NWCF gives the Region a huge financial management advantage. Currently, the Region must hold back a reserve funds for unforeseen contingencies or risk major impacts to program execution plans should an unplanned requirement emerge in the budget execution year. Mission funded activities are required by the Anti-deficiency Act to remain “solvent” or “in the black.” Unexpected costs must be “offset” by deferring other costs or compensated by obtaining more resources from other Region programs or from COMPACFLT. NWCF allows major unplanned, unbudgeted costs to be carried as “losses” and be reconciled in future year rate budgets. Since the utility mission in Japan is prone to unexpected major expenses (infrastructure casualties, changes in host nation support levels, changes in currency exchange rates), NWCF rate protection is an invaluable tool for the Region to effectively engage all available resources in mission accomplishment.

**Eliminates Monthly Cash Flow Problems.** Much of the revenue required to operate the utility mission is obtained from commodity refunds through the Host Nation Utility Cost Share (UCS) program. However, the UCS refunds come after consumption on a quarterly basis. The Navy must pay commercial service providers on a monthly basis. Bases have created cash reserves to deal with this cash flow problem by tying up other program and reimbursable tenant funds. This scenario is cumbersome, administratively intensive, and, at times, confusing to Navy leadership. The record also reflects that all tenant accounts have not been properly compensated after UCS refunds were received. NWCF eliminates this problem, since the NWCF corpus allows monthly utility bills to be paid ahead of UCS refunds without tying up funds or creating Anti-deficiency Act violations.

**Spreads Required Overhead Proportionately to All Clients.** NWCF fully-costed rates imbeds all costs in the rate charged to each client. Accordingly, required productive and G&A overhead is

proportionally spread to all utility consumers. This NWCF advantage frees the Region from paying all required utility management overhead costs, as it does today for mission funded operations.

**Provides Full Cost Visibility.** NWCF Business Model has a rigorous cost control accounting system that provides full cost visibility and meaningful identification of costs at all levels. In turn, cost visibility ensures the service delivery command is accountable to operate efficiently and effectively. Full cost visibility is the essence of Activity Based Costing – Management (ABC-M), an initiative the Navy is promoting throughout the service. The underlying reason for ABC-M is to identify all costs, including overhead, which the current mission-funded concept of operations does not effectively measure.

**Aggressively Manages and Controls Cost in Execution Year.** NWCF brings full cost visibility and accountability. NWCF managers aggressively manage expenditures to stay on budgeted execution targets. Financial metrics are carefully documented and reviewed by NAVFAC Corporate leadership on a monthly basis. NWCF managers constantly compare budget execution against the plan and makes near-real-time course corrections as needed. Annual Net Operating Results (NOR) and Accumulated Operating Results (AOR) are fully disclosed to all interested Navy leadership.

**Facilitates Better Investment Planning.** The NWCF budgeting process requires great rigor in development of investment strategies. This process begins over two years before the execution year, allowing strategic focus and careful review by all resource managers. This rigor, accountability, timing, and strategic focus ensures better investment planning.

### **Challenge: Wide Variation in Cost Allocation Methodology.**

Currently, Atsugi and Sasebo set local rates under the mission funded financial management model. Yokosuka sets local rates under the fully costed NWCF business model. Revenue streams include Region funding, reimbursable tenant funding, and host nation utility cost sharing (UCS) subsidies based on actual consumption.

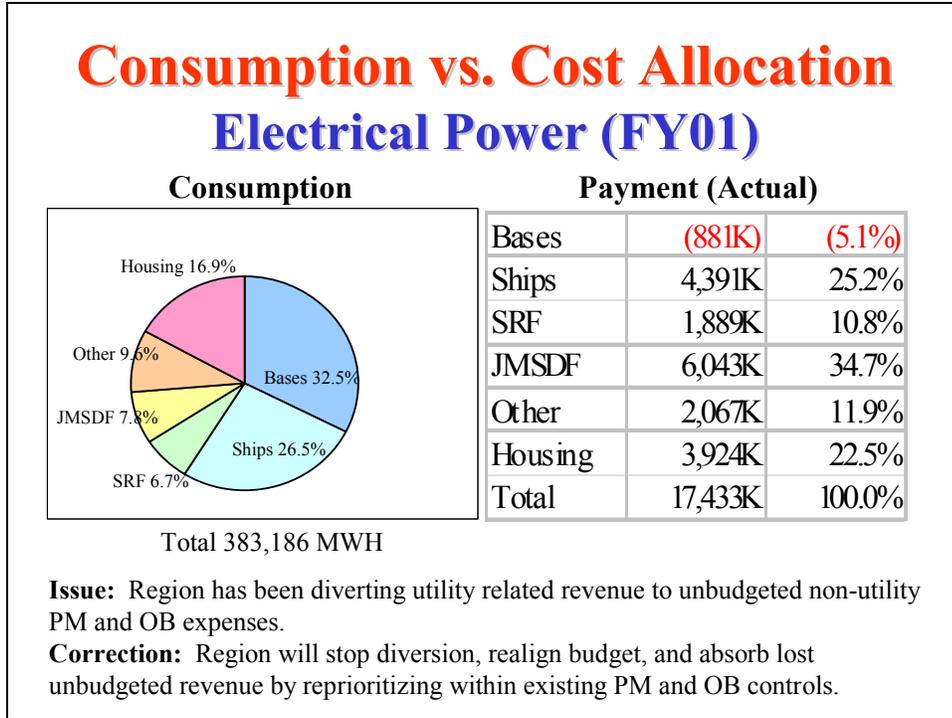
As an example, the chart below shows dramatic variance among Yokosuka, Atsugi, and Sasebo on how utility costs were allocated in the FY01 baseline year. The first column shows the actual cost to purchase commercial electric power. The second column shows the net cost the host base paid. This cost includes the UCS subsidy and excess revenue generated from reimbursable tenants. The third column shows the delivered cost to reimbursable tenants. At Yokosuka, all DoD consumers paid a “fair share” fully costed rate (\$34.57 per MWH). At both Atsugi and Sasebo, the host base actually made a net surplus by holding a disproportional share of UCS and overcharging tenants. This cost allocation method, while financially advantageous to the Installation and Region, cannot be supported by accepted accounting practice and is inconsistent with the spirit of activity based costing and management.

**Current Cost Allocation**  
**(Wide Variation in Methodology)**

<b>Electrical Power</b>	<b>Purchased Cost From Public Utility</b>	<b>Delivered Cost to Host Base</b>	<b>Delivered Cost To Base Tenant</b>
<b>Yokosuka</b>	\$146.95 MWH	\$34.57 MWH	\$34.57 MWH
<b>Atsugi</b>	\$113.77 MWH	Net Surplus	\$117.79 MWH
<b>Sasebo</b>	\$115.08 MWH	Net Surplus	\$85.28 MWH

FY01 Baseline Data

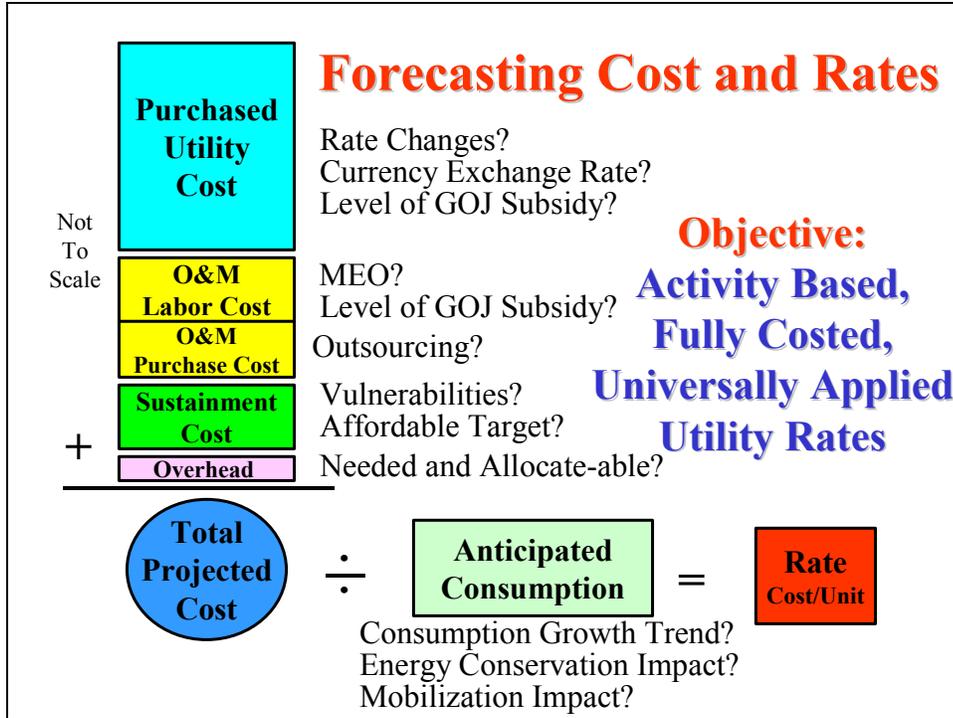
The following chart shows another view of the same FY01 baseline data for electrical power consumption and cost allocation. For example, the Region bases (host commands) collectively consumed 32.5% of the total electrical power, but actually received excess funding in the amount of \$881K (essentially a profit for consuming energy). Navy Family Housing consumed almost 17% of the total electrical power, but paid 22.5% of the cost.



The Regional Commander has directed this imbalanced cost allocation practice be corrected at the earliest possible opportunity. During the FY01 baseline year, Atsugi and Sasebo diverted excess utility revenue (disproportionate UCS holding, overcharged tenant rates) into non-utility programs. Per CNFJ direction, the Region will stop diversions, realign program budgets, and absorb lost revenue from overcharged tenants by reprioritizing expenditures within assigned program targets. In other words, the Region will correct this improper cost allocation scenario without increasing overall top line costs to resourcing major claimant (zero sum adjustment).

**Opportunity: Establish Activity Based, Fully Costed, Universally Applied Utility Rates.**

In the spirit of ABC/M, utility managers should understand and manage cost drivers, use best available information to anticipate consumption, and project break-even rates that are fairly allocated to all utility consumers. The NWCF business model has proven over time to best meet these financial management objectives. The chart below shows graphically the process of forecasting utility cost and projecting utility rates.



**NWCF Accounting System Does Not Add Cost, Just Accounts For Cost.** NWCF provides full cost visibility, enabling managers to understand and control cost. All cost components are manageable, with some cost elements more controllable than others. The best way to save money in the utility business line is to reduce utility consumption and therefore reduce the overall cost of commercially procured utility power.

## PART 4 – OPTIONS

The Regional Commander determined that the “challenges” outlined in Part 3 of this BCA are significant, and greatly limit the Region in effective and efficient management of the utility mission. He directed the Regional Engineer to develop options for meeting the stated *three SUI objectives*:

1. Install robust Regional utility management capability to seize efficiency and effectiveness opportunities
2. Leverage existing core utility management capability of PWC Japan
3. Expand the coverage of the Navy Working Capital Fund financial management benefits across all U. S. Navy Japan bases.

This Part 4 of the BCA identifies and evaluates *four options* to meet the Regional Commander’s SUI strategic objectives. The four options are:

1. Add New Regional Utility Management Staff
2. Region Purchases Utility Management Support from PWC Japan
3. Region Purchases Utility Management Support from a Commercial Provider
4. Region Fully Leverages Existing PWC Japan Utility Management and Operations Capability

### OPTION 1:

#### ADD NEW REGIONAL UTILITY MANAGEMENT STAFF

**Option Defined.** SUI Objective 1 requires installation of robust Regional utility management capability to seize efficiency and effectiveness opportunities. This is a *minimum* step required to make forward progress in meeting the current challenges of Region utility management.

The functions of “Regional Utility Management” are:

- Central Utility Business Line Management
- Utility Program Management Support
- Utility Engineering and Sustainment Project Management Support
- Energy Conservation Program Management and Project Development
- Utilities Program Financial Management Support

**Regional Utility Business Line Financial Management Concept of Operations.** The following is the concept of operations for performing financial management support of the Regional Utilities Business Line under Option 1.

#### **Utilities Management Functions (Performed by Utilities BLM):**

- Develop Overall Utilities Financial Management Strategy:
  - Define Costs:
    - purchased utility cost
    - operations and maintenance cost
    - sustainment/recapitalization cost
    - allocate-able overhead cost
  - Define Revenues:

- Host Nation Support (Utility Cost Sharing program)
- CNFJ Region funding
- Reimbursable Navy/DoD tenant funding
- Private client funding
- Define Consumption Projections
  - Historical trends
  - Impact of energy conservation
  - Impact of possible FDNF mobilization scenarios
- Develop Mission Funded Utility Rates
- Track Financial Results
- Direct Adjustments to Keep Actual Costs in line with Planned Cost
- Improve Strategy for Next Cycle

**Utilities Management Functions (Performed by Utilities BLM with RPAO):**

- Region Program Management Budget Functions
  - Understand and Prioritize Requirements
  - Develop Execution Plan within Financial Targets
  - Submit Program Budget input
  - Identify Unfunded Requirements
  - Track Budget Execution and Burn rates
  - Make Necessary Adjustments to Ensure Solvency

**Financial Management Functions (performed by Centralized Financial Support Staffing):**

- Reimbursable account management
  - ISSA management and maintenance
  - Billing
  - Funds receipt/acceptance
  - Disperse Reimbursable revenues to Pay Costs
  - Billing vs. Cost reconciliation
- Managing/Paying purchased utility accounts
  - Bill validation
  - Certification and payment
- UCS management
  - Interface with USFJ UCS managers
  - Collect and Report Actual Consumption Data
  - Disperse UCS revenues to Pay Costs
  - Reconciliations and adjustments

**Assumptions:**

- All program and financial management functions will be performed centrally at the Region. There are no Base-level functions in these areas. (Needs process redesign.)
  - Utilities BLM has overall responsibility to manage Regional Utility program execution. (Consistent with RFMS design.)
    - **PWC Japan will continue to set NWCF rates for its client base separately from the Region's MF rate setting process.**

**Regional Engineer Staffing.** From our analysis, the new Regional Utility Management Staff would require, as a minimum, the following three new CNFJ Region positions:

1. Region Utilities Business Line Manager (target GS-13)
  - provides overall utility business line management within RFMS management structure, responsible for technical expertise, innovation, centralized utility, and establishment of common utility business practices. Maintains strategic planning focus. Aggressively pursues positive change in terms of utility mission effectiveness and efficiency.
2. Region Utilities Engineer (target GS12 or MLC 1-8)
  - provides expertise on utility system conditions and sustainment requirements, integrates requirements, and advocates investment
3. Region Energy Management Specialist (MLC 1-8)
  - provides driving force to identify and exploit energy savings opportunities.

**Shared responsibilities:** Under Option 1, the Regional Engineer Staff and the Regional Comptroller Staff would share overall utility management responsibilities. The Regional Engineer would manage the overall utility program, and the Regional Comptroller would provide financial management support for mission funded components of the utility business line.

**Regional Engineer Staff.** The Regional Engineering Staff would consist of the BLM staff of the Utilities Business Line Manager (GS-13), Regional Utilities Engineer (MLC), and Regional Energy Manager (MLC). The BLM concept incorporates an upper tier of management that is part of the Regional Facility Management Team. The Regional Engineering Staff is an integrated component of the CNFJ Region Staff.

The Utility Business Line Manager (BLM) possesses a robust utilities management expertise with responsibilities directed towards improved business effectiveness and efficiency. The BLM would have an enhanced overview of utility operations and would assist in developing and influencing regional requirements and resources. There will be two-way communication and coordination between and among the utility departments/divisions/branches to foster sharing of success stories, utility issues, lessons learned, knowledge, experience, and innovative ideas. With such knowledge, the BLM will be able to establish common business practices among the locations.

The Base-level Utilities Division/Branch Director is, and will remain, the senior individual at each base who performs utilities management on a full-time basis. Under a matrix organization concept, these individuals work for the Public Works Officer and with BLM.

**Regional Comptroller Staff.** The responsibilities of this staff would include reimbursable billings, payment of purchase utility bills, management and distribution of the GOJ UCS, and preparation and analysis of various utility reports. The CNFJ Regional Comptroller anticipates no increase to its staff to perform these functions in support of the Utilities BLM.

**Analysis.** The following chart summarizes the Regional Engineer analysis of Option 1.

## **Option 1: Add New Regional Utility Management Staff**

- Pros:
  - Facilitates Movement on Savings Opportunities
  - Facilitates Consistent Business Practices
  - Allows Integrated Investment Strategy
- Cons:
  - Requires Increased Region Staffing to Execute
  - Duplicates PWC Core Utility Management Capability
  - Does Not Expand Coverage of NWCF Financial Management Advantages
  - Still 2 Different Business Models (NWCF and MF)

### **Advantages (Pros) of Option 1:**

**Facilitates Movement on Savings Opportunities.** Option 1 installs significant Regional utility management capability. One of the main objectives of Regional Utility Management is to aggressively identify and pursue utility program efficiency opportunities, creating greater return on investment (ROI). The Region perspective enables this objective to move forward with dedicated management attention and the ability to target investment resources.

**Facilitates Consistent Business Practices.** Installation of Regional utility management capability directly addresses the current inconsistency in our Base-centric management model. The BLM will determine “best in class” business practices for utility management and will lead efforts to transition to most effective and efficient business processes.

**Allows Integrated Investment Strategy.** Regional utility management capability will enable an integrated (Region-wide) assessment of requirements and a process to prioritize requirements based on mission criticality and system vulnerabilities. This process will ensure we gain the greatest utility mission readiness return of investment (“best bang for the buck”).

### **Disadvantages (Cons) of Option 1:**

**Requires Increased Region Staffing to Execute.** Regional Engineer functional analysis has determined that three CNFJ Staff positions would need to be created for this Option (Business Line Manager, Utility Engineer, Energy Management Specialist). CNFJ Region would have to obtain the Full Time Equivalent (FTE) and labor funding for this new positions either by reprioritizing within existing resources or requesting additional resources from the resourcing major claimant.

**Duplicates PWC Japan Core Utility Management Capability.** The Regional Commander’s SUI Strategic Objective 2 is to leverage existing PWC Japan core capabilities for utility management. Option 1 essentially *duplicates this core capability* by adding new positions directly onto the Region Staff.

**Does Not Expand Coverage of NWCF Financial Management Advantages.** The Regional Commander’s SUI Strategic Objective 3 is to expand the coverage of the Navy Working Capital Fund financial management benefits across all U. S. Navy Japan bases. Option 1 does not expand coverage of the NWCF, and actually expands the mission funded component of the overall business line by adding mission funded Regional staff.

**Continues Use of Two Separate Business Models for Utility Management.** Part of the inefficiency currently inherent in the Base-centric management scenario is extensive use of two dramatically different business models. The mission funded model covers about 40% of the total business line and NWCF model covers about 60%. Managing the business line through two business models is inefficient, cumbersome, and at times confusing to senior leadership and reimbursable clients.

**Cost to Implement Option 1:**

Full time Utilities BLM (GS-13)	Cost: \$110K
Full time Utilities Engineer (MLC 1-8)	Cost: \$50K
Full time Utilities Energy Specialist (MLC 1-8)	Cost: \$50K
Purchased Engineering Consultant Support	Cost: \$50K
Travel Cost: (estimate 3 trips/site/person/yr)	Cost: \$15K
Miscellaneous Productive Overhead	Cost: \$5K

Total Cost: <b>\$280K per year</b>
------------------------------------

**Bottom Line Assessment:** Option 1 satisfies SUI Strategic Objective 1, but ignores SUI Objectives 2 and 3.

**Option 2:  
Region Purchases Utility Management Support from PWC Japan**

**Option Defined.** Under Option 2, the CNFJ Regional Engineer would not increase it Region staffing, but would “outsource” the Region utility management function by *purchasing* support from PWC Japan. PWC Japan would bill the Region for its cost to perform the function on a reimbursable, fixed price basis.

The same functions of Regional Utility Management would be required and performed, as in Option 1, only now by *PWC Japan staffing acting as a consultant to the Regional Engineer*. The Regional Comptroller would perform the mission funded financial management component of the Regional Utility Management Program, similar to Option 1.

Note that this Option *does not expand the coverage of the NWCF* financial management advantages, since the mission funded component of the utilities business line will remain. Option 4, described later, addresses expansion of the NWCF coverage.

**Analysis.** The following chart summarizes the Regional Engineer analysis of Option 2.

**Option 2:**  
**Region Purchases Utility Management  
 Support from PWC Japan**  
**(w/o expanding NWCF coverage to new bases)**

- Pros:
  - Same as Option 1
  - Does Not Increase Region Staff
  - Leverages PWC Japan Core Utility Management Capability
- Cons:
  - Increases Region Cost to Purchase Support
  - Does Not Expand Coverage of NWCF Financial Management Advantages
  - Still 2 Different Business Models (NWCF and MF)

### **Advantages (Pros) of Option 2:**

**Facilitates Movement on Savings Opportunities.** Option 2 installs significant Regional utility management capability. One of the main objectives of Regional Utility Management is to aggressively identify and pursue utility program efficiency opportunities, creating greater return on investment (ROI). The Region perspective enables this objective to move forward with dedicated management attention and the ability to target investment resources.

**Facilitates Consistent Business Practices.** Installation of Regional utility management capability directly addresses the current inconsistency in our Base-centric management model. The BLM will determine “best in class” business practices for utility management and will lead efforts to transition to most effective and efficient business processes.

**Allows Integrated Investment Strategy.** Regional utility management capability will enable an integrated (Region-wide) assessment of requirements and a process to prioritize requirements based on mission criticality and system vulnerabilities. This process will ensure we gain the greatest utility mission readiness return of investment (“best bang for the buck”).

**“Outsourcing” Function Prevents Region Staffing Growth.** By purchasing the Region Utility Management support from PWC Japan, CNFJ will not have to expand its in-house staffing and corresponding mission funded labor liability. This approach is consistent with overall DoD and Navy drive to leverage existing “external” capabilities and not internally staff “non-core” functions.

**Partially Leverages PWC Japan Core Utility Management Capability.** By purchasing consultant support from PWC Japan, CNFJ is leveraging existing core competency external to its organization. *PWC Japan core competency is proven effective and efficient* in managing the 60% of the Region Utility Business Line. This Option allows the same core management capability to oversee requirements of the entire Utility Business Line. Although better than Option 1, Option 2 only partially leverages PWC core capability because it *fails to capture the synergy of PWC management through the NWCF* business model. This synergy is described later in Option 4.

### Disadvantages (Cons) of Option 2:

**Increases Regional Utility Program Cost to Purchase Dedicated Support.** Compared to no cost for essentially no central management capability, this Option increases the program cost by the purchase amount. The Regional Engineer must identify a program “off-set” (deferred or eliminated cost) to accommodate this new program cost.

**Does Not Expand Coverage of NWCF Financial Management Advantages.** The Regional Commander’s SUI Strategic Objective 3 is to expand the coverage of the Navy Working Capital Fund financial management benefits across all U. S. Navy Japan bases. Option 2 does not expand coverage of the NWCF, and actually expands the mission funded component of the overall business line by adding mission funded Regional staff.

**Continues Use of Two Separate Business Models for Utility Management.** Part of the inefficiency currently inherent in the Base-centric management scenario is extensive use of two dramatically different business models. The mission funded model covers about 40% of the total business line and NWCF model covers about 60%. Managing the business line through two business models is inefficient, cumbersome, and at times confusing to senior leadership and reimbursable clients.

### Cost to Implement Option 2:

Full time Utilities BLM (GS-13)	Cost: \$110K
Half time Utilities Engineer (MLC 1-8)	Cost: \$25K
Half time Utilities Energy Specialist (MLC 1-8)	Cost: \$25K
Purchased Engineering Consultant Support	Cost: \$50K
Travel Cost: (estimate 3 trips/site/person/yr)	Cost: \$15K
Miscellaneous Productive Overhead	Cost: \$5K
Allocate-able PWC G&A Support	Cost: 0

Total Fixed Price Cost: **\$230K per year**

**Bottom Line Assessment:** Option 2 satisfies SUI Strategic Objective 1, partially satisfies SUI Strategic Objective 2, but ignores SUI Objective 3.

### **Option 3: Region Purchases Utility Management Support from a Commercial Provider**

**Option Defined.** Under Option 3, the CNFJ Regional Engineer would not increase its Region staffing, but would “outsource” the Region utility management function by *purchasing* support from a commercial provider (utility management consultant) by means of a professional services contract through Officer in Charge of Construction, Far East (OICC FE). The Region would fund the fixed price contract on an annual basis.

The same functions of Regional Utility Management would be required and performed, as in Options 1 and 2, only now by *a contracted consultant to the Regional Engineer*. The Regional Comptroller would perform the mission funded financial management component of the Regional Utility Management Program, similar to Options 1 and 2.

Note that this Option *does not expand the coverage of the NWCF* financial management advantages, since the mission funded component of the utilities business line will remain. Option 4, described later, addresses expansion of the NWCF coverage.

**Analysis.** The following chart summarizes the Regional Engineer analysis of Option 3.

<p><b>Option 3:</b></p> <p><b>Region Purchases Utility Management Support from a Commercial Provider</b></p> <ul style="list-style-type: none"> <li>• Pros:           <ul style="list-style-type: none"> <li>– Same as Options 1</li> <li>– Does Not Significantly Increase Region Staff</li> </ul> </li> <li>• Cons:           <ul style="list-style-type: none"> <li>– Most Expensive Solution</li> <li>– Duplicates PWC Core Utility Management Capability</li> <li>– Does Not Expand Coverage of NWCF Financial Management Advantages</li> <li>– Still 2 Different Business Models (NWCF and MF)</li> </ul> </li> </ul>
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#### **Advantages (Pros) of Option 3:**

**Facilitates Movement on Savings Opportunities.** Option 3 installs significant Regional utility management capability. One of the main objectives of Regional Utility Management is to aggressively identify and pursue utility program efficiency opportunities, creating greater return on investment (ROI). The Region perspective enables this objective to move forward with dedicated management attention and the ability to target investment resources.

**Facilitates Consistent Business Practices.** Installation of Regional utility management capability directly addresses the current inconsistency in our Base-centric management model. The consultant BLM will determine “best in class” business practices for utility management and will lead efforts to transition to most effective and efficient business processes.

**Allows Integrated Investment Strategy.** Regional utility management capability will enable an integrated (Region-wide) assessment of requirements and a process to prioritize requirements based on mission criticality and system vulnerabilities. This process will ensure we gain the greatest utility mission readiness return of investment (“best bang for the buck”).

**“Outsourcing” Function Limits Region Staffing Growth.** By purchasing the Region Utility Management support to a contracted consultant, CNFJ will not have to expand its in-house staffing and corresponding mission funded labor liability. This approach is consistent with overall DoD and Navy drive to leverage existing “external” capabilities and not internally staff “non-core” functions. The Region would need to add one on-Staff utility position to act as the Contracting Officer’s Technical Representative (COTR).

### **Disadvantages (Cons) of Option 3:**

**Increases Regional Utility Program Cost to Purchase Dedicated Support.** Compared to no cost for essentially no central management capability, this Option significantly increases the program cost by the purchase amount. The Regional Engineer must identify a program “off-set” (deferred or eliminated cost) to accommodate this new program cost.

**Most Expensive Solution.** Based on market analysis of this type of professional services contract, the projected cost of would be *twice the cost* of performing the same function with government employees (see cost estimate below). The Option also requires establishment of an on-Staff COTR position.

**Duplicates PWC Japan Core Utility Management Capability.** The Regional Commander’s SUI Strategic Objective 2 is to leverage existing PWC Japan core capabilities for utility management. Option 3 essentially *duplicates this core capability* by purchasing new utility management capability at significant expense.

**Does Not Expand Coverage of NWCF Financial Management Advantages.** The Regional Commander’s SUI Strategic Objective 3 is to expand the coverage of the Navy Working Capital Fund financial management benefits across all U. S. Navy Japan bases. Option 3 does not expand coverage of the NWCF, and actually expands the mission funded component of the overall business line by adding mission funded Regional staff.

**Continues Use of Two Separate Business Models for Utility Management.** Part of the inefficiency currently inherent in the Base-centric management scenario is extensive use of two dramatically different business models. The mission funded model covers about 40% of the total business line and NWCF model covers about 60%. Managing the business line through two business models is inefficient, cumbersome, and at times confusing to senior leadership and reimbursable clients.

### **Cost to Implement Option 3:**

Based our market analysis of professional services costs, estimate for contracting the utilities business line management:

#### Low End Estimate:

Utilities Business Line Manager	\$40/hour x 2,080 hours =	\$83,200
Engineering Support	\$32/hour x 2,080 hours =	\$66,560
Energy Conservation Engineer	\$32/hour x 2,080 hours =	\$66,560
Total		\$216,320
Overhead 80%(can be much higher, depending on firm)		\$173,056
Profit 10% (typical for professional services)		<u>\$ 38,937</u>
Total		\$428,313
Government COTR (MLC 1-7)		\$50,000

Total Cost Estimate: \$478,313 per year
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Note: These numbers are based on the current hourly rates that we use for negotiating A/E contracts. Rates have been certified by the Defense Contract Audit Authority. Overhead includes all costs for support of an office, including support staff, office rents/mortgage, utilities costs, travel, and office maintenance and upkeep.

**Bottom Line Assessment:** Option 3 satisfies SUI Strategic Objective 1, but ignores SUI Objectives 2 and 3.

### **Option 4:**

#### **Region Fully Leverages Existing PWC Japan Utility Management and Operations Capability**

**Option Defined.** Under Option 4, the CNFJ Regional Engineer would not increase its Region staffing, but would “outsource” the entire Region utility management function to PWC Japan. PWC Japan would manage, operate, and deliver utility services exclusively through the Navy Working Capital Fund business model using fully-costed, break-even utility rates to recover purchase, operating, and plant sustainment costs. The mission funded component of the business line is eliminated.

The Regional Utility Management function would be performed by PWC Japan *as an integrated part of its overall utility delivery service*. The Regional Comptroller would no longer be directly involved or spend significant effort in utility financial management, since the mission funded component of the utility business line is eliminated.

**Analysis.** The following chart summarizes the Regional Engineer analysis of Option 4.

**Option 4:**  
**Region Fully Leverages Existing PWC Japan  
 Utility Management and Operations  
 Capability**

- Pros:
  - Same As Option 1
  - Fully Leverages Existing PWC Japan Core Utility Management Capability
  - No Region Staff Growth
  - One Business Model (NWCF)
  - Full Coverage of NWCF Financial Management Advantages
  - Most Efficient Solution for Region and Navy
- Cons:
  - Requires Resource Transfer (OMN– NWCF)

#### **Advantages (Pros) of Option 4:**

**Facilitates Movement on Savings Opportunities.** Option 4 delivers significant Regional utility management capability. One of the main objectives of Regional Utility Management is to aggressively identify and pursue utility program efficiency opportunities, creating greater return on investment (ROI). The Region perspective enables this objective to move forward with dedicated management attention and the ability to target investment resources.

**Facilitates Consistent Business Practices.** Installation of Regional utility management capability directly addresses the current inconsistency in our Base-centric management model. The BLM will determine “best in class” business practices for utility management and will lead efforts to transition to most effective and efficient business processes, building on proven NWCF business practices.

**Allows Integrated Investment Strategy.** Regional utility management capability will enable an integrated (Region-wide) assessment of requirements and a process to prioritize requirements based on mission criticality and system vulnerabilities. This process will ensure we gain the greatest utility mission readiness return of investment (“best bang for the buck”).

**Fully Leverages Existing PWC Japan Core Utility Management Capability.** By completely “outsourcing” the utility management mission to PWC Japan, CNFJ is maximizing leverage of existing core competency external to its organization. *PWC Japan core competency is proven effective and efficient* in managing the 60% of the Region Utility Business Line. This Option allows the same core management capability to effectively manage the entire Utility Business Line.

**“Outsourcing” Function Avoids Region Staffing Growth.** By purchasing the Region Utility Management support to a contracted consultant, CNFJ will not have to expand its in-house staffing and corresponding mission funded labor liability. This approach is consistent with overall DoD and Navy drive to leverage existing “external” capabilities and not internally staff “non-core” functions.

**Region Now Has One Utility Business Model.** Option 4 moves all utility management and operations under the NWCF business model, gaining overhead efficiencies, simplifying management processes, and capturing “economies of scale” by expanded use of existing NWCF overhead structure.

**Full Coverage of the NWCF Financial Management Advantages.** By moving the entire Utility Business Line to the NWCF business model under PWC Japan, the remaining 40% of the utility mission will enjoy the financial management advantages outlined in Part 3 of this BCA.

**Most Efficient Solution for the Region and Navy.** By leveraging *existing* PWC Japan utility management capabilities, the Region will receive significant benefits without cost or staffing growth. PWC already has “critical mass” of capability and will not significantly expand management staff to perform the greater mission, totally avoiding duplication of functions and corresponding resource needs. Also, PWC Japan can spread its existing fixed overhead costs over a greater volume of business, achieving economies of scale.

#### **Disadvantages (Cons) of Option 4:**

**Implementation Requires Higher Authority Approval.** While Options 1, 2, and 3 can be implemented within Region Commander’s authority, Option 4 requires approval by both the Region’s major claimant, COMPACFLT, and PWC Japan’s major claimant, COMNAVFACENGCOM. This approval would include transfer of the maintenance responsibility of the 40% mission funded utility infrastructure from COMPACFLT to NWCF, with NAVFAC being the Budget Submitting Office (BSO). This infrastructure is presently valued at about \$681M. Approval would also include a functional transfer of mission funded civilian positions, currently estimated at 52 Japanese MLC host nation funded positions and one USCS position. Resource transfer does not include any military billets. Ultimately, CNO Staff, including the Navy Comptroller, would have to approve the resource and mission transfer. Also anticipate review by the Deputy Secretary of the Navy (Installations and Facilities).

#### **Cost to Implement Option 4:**

Under Option 4, all costs to deliver utilities are included in fully-costed NWCF utility rates. Utility business line management and utility financial management are budgeted in rate development as “productive” or “general and administrative (G&A) overhead costs. This cost is distributed

proportionately to all utility consumers, so the Region only pays for its proportion of this required overhead cost. Under Options 1, 2, and 3, the Region paid 100% of this cost.

Full time Utilities BLM (GS-13) (new PWC position)	New Cost: \$110K
Utilities Engineer (MLC 1-8) (existing PWC position)	New Cost: 0
Utilities Energy Spec. (MLC 1-8) (existing PWC position)	New Cost: 0
Purchased Engineering Consultant Support	New Cost: \$50K
Travel Cost: (estimate 3 trips/site/person/yr)	New Cost: \$15K
Miscellaneous Productive Overhead	New Cost: \$5K
Allocate-able PWC G&A Support	New Cost: 0

New Utility Commodity Overhead Cost: **\$180K per year**

**Note: This cost imbedded in NWCF rates.**

**Bottom Line Assessment:** Option 4 fully satisfies SUI Strategic Objectives 1, 2, and 3.

## PART 5 – RECOMMENDATION

The Regional Engineer recommends **Option 4** (Region Fully Leverages Existing PWC Japan Utility Management and Operations Capability) as the **best solution to meet all Strategic Utilities Initiative objectives**. As an interim step, recommend Option 2 (Region Purchases Utility Management Support from PWC Japan).

### Recommendation

- Implement **Option 4** Beginning FY05
  - Fully Leverages PWC Japan Core Capability (SUI Objective 2)
  - Expands Coverage of NWCF Financial Advantages (SUI Objective 3)
- Implement **Option 2** As Interim Step Beginning Now
  - Install Robust Regional Utility Management Capability (SUI Objective 1)
    - Could Continue Indefinitely if Option 4 Not Approved by Higher Authority

Options 4 is clearly the best solution to meet the Regional Commander's strategic objectives and Region needs, as outlined in the following chart.

## **Best End-State Solution:**

### **Option 4**

- **Region Need:** Movement on Savings Opportunities
  - **PWC Enabler:** Focused Management Team, Accountable for Results
- **Region Need:** Leverage Capabilities of Existing External Core Competencies, Minimize Staff Growth
  - **PWC Enabler:** Proven Utility Management Capability, Available Critical Mass of Management Talent
- **Region Need:** Consistent Business Practices Across Region
  - **PWC Enabler:** Yokosuka (NWCF) Already 60% of Region Volume
- **Region Need:** Integrated Investment Strategy for Maximum ROI
  - **PWC Enabler:** Proven NWCF Capitalization and Budget Processes
- **Region Need:** Centralized Financial Management Processes
  - **PWC Enabler:** NWCF Financial Management Advantages
- **Region Need:** Effective Cost Control
  - **PWC Enabler:** Proven Track Record of Beating Budgeted Cost Projections

**Movement on Savings Opportunities.** PWC Japan has a proven track record of aggressively pursuing opportunities to reduce cost. The existing critical mass of utility management talent, coupled with the new dedicated Region Business Line Manager, creates the enabling talent to identify, plan, invest, and execute initiatives that reduce the cost of delivered service.

**Leverages Capabilities of Existing Core Competencies.** PWC Japan is the recognized leader in utility management in the Region. This solution builds on proven success.

**Consistent Business Practices.** By moving to outsourcing to PWC Japan, consistency will be achieved by employment of proven effective NWCF business management processes.

**Integrated Investment Strategy.** PWC Japan has been investing for years in its utility infrastructure through proven effective NWCF recapitalization procedures imbedded in the NWCF budgeting process. Result: most reliable, mission capable utility systems in the Region.

**Centralized Financial Management Processes.** PWC Japan employs proven effective NWCF financial management processes and has assembled core talent in rate management. Result: lowest unit cost in the Region.

**Effective Cost Control.** PWC Japan has an excellent track record of controlling cost and maintaining “flat” rates in an unpredictable cost environment. NWCF financial advantages protect clients from rate increases in the execution year due to unexpected, unbudgeted costs.

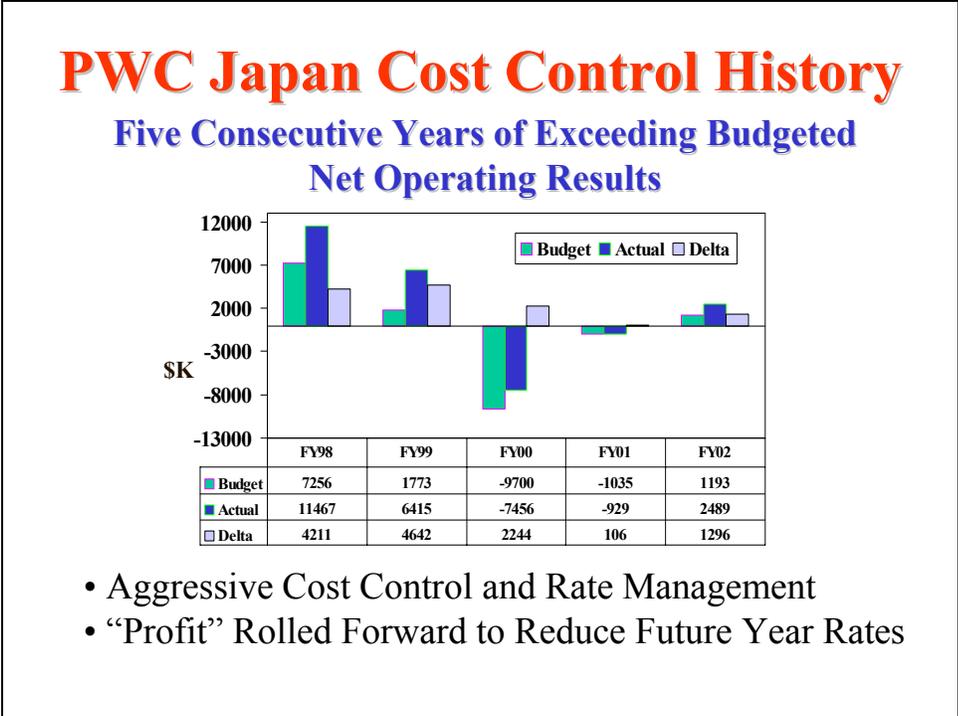
## **PWC Japan Core Utility Management Capability**

- **Effective:**
  - Most Reliable Utility Systems in AOR
  - Managed by Team of Senior Utility Professionals
  - Technically Backed by NAVFAC PWC Corporation
  - Mature, Proven Business Processes
- **Efficient:**
  - Lowest Unit Cost in AOR
  - Historical Track Record for Effective Cost Control and Stabilized Rates
- **Accountable:**
  - CO Reports Directly to CNFJ
  - Full Cost Visibility, Published Financial Results

**Core Utility Management Capability.** PWC Japan has a consistent proven track record of success against the macro performance metrics most important to the Regional Commander.

**Effectiveness:** PWC Japan maintains the most mission ready and reliable utility systems of any base in Japan. PWC has the “critical mass” of utility professionals, technically backed by Naval Facilities Engineering Command, the Navy’s Systems Command for Facility Engineering. NWCF business practices are “best of type” in achieving activity based costing and management goals. PWC Japan consistently leads other Navy PWCs in key performance metrics, including mission accomplishment, financial results, and workforce safety. The last PWC Japan resulted in zero findings, a first for any Navy PWC.

**Efficiency:** Despite having the most reliable and capable systems and paying the highest cost for purchased commercial utilities, PWC Japan has the lowest unit cost of delivered utility service. PWC Japan has a proven track record of effective cost control and rate management. The following chart shows that PWC Japan has operated for each of the last five years below budgeted operating costs. This cost avoidance is rolled forward to reduce cost of service in future years by investing in lower NWCF rates.



**Accountability.** The Commanding Officer of PWC Japan reports directly to the Regional Commander and is fully accountable for meeting the CNFJ Region utility management mission. PWC Japan has full financial accountability and visibility, with fully open disclosure on all cost, constant cost versus budget variance review, and published end of year financial results. Currently PWC Japan has a positive Accumulated Operating Result (AOR) of over \$5M, which is reducing future NWCF rates. The Region and PWC work closely together to develop future rate strategies, ensuring the Region’s evolving mission, priorities, and funding limitations are factored into the NWCF budgeting process.

**Option 2 as an Interim Step.**

Option 2, as an interim step, gets the Region *started quickly* on central utility management and is *consistent with recommended end-state solution* outlined in Option 4. The following chart shows the Regional Utility Management functions that will be performed by PWC Japan on a reimbursable basis for the Region.

## Option 2 as an Interim Step

- Functions:
  - Central Utility Management
  - Utility Program Management Support
  - Utility Engineering and Sustainment Project Management Support
  - Energy Conservation Program Management and Project Development
  - Utilities Program Financial Management Support
- Performed for the Region by PWC Japan as Purchased Support

**End-state Regional Utility Business Line Operational Model.** The end-state utility business line operation model would have all U. S. Navy owned utility systems operated collectively by PWC Japan detachments at each base, as part of the Region Facility Management System (RFMS). Each PWC detachment would be operationally coordinated by the Base Public Works Officer. Operations would be supported exclusively through the Navy Working Capital Fund financial management model, which would include plant sustainment and recapitalization as part of the NWCF rate structure. PWC Japan would establish Regional utility rates, incorporating all costs, investments, and subsidies. Upon approval of the recommendation, the Regional Engineer will plan and transition to the full NWCF business line model in the remainder of FY03 and FY04. Objective is to begin full NWCF supported operations in October 2004, the beginning of FY05.

## Regional Utility Business Line Operational Model

- All Navy Owned Systems and Infrastructure Move to NWCF Business Model
- Entire Utility Business Line Executed Through PWC Japan
- Regional Plant Investment Strategy
- Regional Utility Rates
- Plan and Transition FY03/04, Begin FY05

**Anticipated Benefits.** Anticipated benefits of this recommended change are *significant*. Benefits include *lower overall utility cost*, higher Regional system *reliability*, and standard use of *best business practices*. The following chart shows supporting components of each of these important performance metrics.

## Anticipated Benefits

- ✓ Lower Overall Cost
  - Enables Effective Cost Management
  - Facilitates Movement on Savings Opportunities
  - No Cost Growth in Transition (Within Existing Funding Targets)
- ✓ Higher System Reliability
  - Robust Utilities Management Expertise
  - Surge Capability to Address System Casualties
  - Ability to Target Plant Investment
- ✓ Better Business Practices and Financial Advantages
  - Full Cost Visibility
  - Cost Protection for Region During Execution Year
  - Simplified Funds Flow
  - All Clients Pay “Fair Share” of Total Cost of Service Delivery
  - Elimination of Execution Year Cash Flow Problems
  - Consistent, Predictable Rates for Regional Clients

**Anticipated Risks.** Anticipated risks of the recommended charge are *minimal*.

**Transportation Success Story.** PWC Japan assumed the entire CNFJ Region transportation function in FY99. By any measure, this initiative is considered a huge success story for the Region. By leveraging the core competency of the PWC transportation professionals and the NWCF financial management model, CNFJ Region has greatly improved the mission readiness and reliability of its supporting transportation fleet. The percentage of “overage” vehicles has dramatically dropped, and continues to rapidly decrease. Long-standing vehicle allowance issues have been resolved. All vehicle users understand and pay for their “fair share” of the cost of transportation service, in line with ABC/M principles. The function transfer was accomplished by PWC Japan without cost growth in transition. Total cost of transportation to the Region has actually reduced. Better service for less cost. This successful precedence gives the Regional Commander great confidence that the utility transfer would also be a huge success story.

**PWC Japan Already Supports 60% of the Utility Mission.** PWC Japan already operates essentially all of the Yokosuka Naval Complex, with all its remote satellite facilities, under the NWCF business model. All business procedures and processes are mature and proven. Expanding the PWC business coverage to include Atsugi and Sasebo sites creates efficiency opportunities, standardizes business practices, enables integration of sustainment requirements, and gains greater overhead efficiency.

**Navy Decision.** Should future Navy leadership determine that the NWCF business model be replaced with a better or different business model, the change can be directed and implemented at that time. This is entirely an internal Navy decision.

## Anticipated Risks

- Minimal:
  - Entire Region Transportation Function Successfully Moved to NWCF in FY99
    - Greatly Improved Equipment Reliability
    - No Cost Growth
  - Yokosuka Utilities Currently Supported by NWCF
    - Largest, Most Industrial Base (63% of Region Utility Mission)
    - Most Reliable, Lowest Unit Cost in Region
    - Mature, Fully Visible Activity Based Costing Principles
  - Navy Can Always Direct Return to Mission Funded Model

**Anticipated Issues.** There are both context and resource realignment issues that must be considered in this decision.

**Navy Leadership View of NWCF.** Some Navy leaders are concerned that NWCF is not the best financial management model for the future. Concern for unbudgeted cost over-runs at Navy Shipyards and Navy Air Depots have created uncertainty. The Public Works Center part of the NWCF has been and remains a true success story. The PWC portion of the NWCF corpus remains healthy and “in the black.” NWCF does not add cost, as it is only a set of accounting and management procedures using a revolving fund for capital. Any business model will produce good or bad results depending on the quality of decisions of senior managers. Today, the NWCF is the best model the Navy has to manage and operate in a full cost visibility environment, the goal of activity based costing and management principles. While the future of NWCF is a valid question, continuing to build on the success of the part of NWCF that works well, the PWC part, seems prudent and desirable.

**Commander, Naval Installations.** CNO appears ready to transition shore installation management to a single claimant, Commander, Naval Installations (CNI). Study groups are underway to design how CNI would operate. Nothing in this Strategic Utilities Initiative appears inconsistent with the stated Navy goals and objectives for shore installation management and the CNI concept. In fact, this initiative aggressively targets those goals. Greater efficiency and return on investment (ROI), best in class business practices, outsourcing to external core competency, etc., are exactly what CNI is promoting.

## Anticipated Issues

- Context:
  - Navy Leadership View of NWCF Business Model?
  - CNI Stand Up Implications?
- Resource Alignment
  - Reprogramming Within Existing Budgets
  - Resource Transfer to NWCF

**Mission and Resource Transfer to NWCF.** The most significant challenge of implementing this recommendation is the transfer of mission responsibility and executing resources from COMPACFLT and Region mission funded model to the NWCF model, sponsored by NAVFAC and PWC Japan. The

major issue is the transfer of maintenance responsibility for approximately \$681M mission funded utility infrastructure to NWCF. Also significant is the transfer of the mission funded utility workforce, about 52 positions, to NWCF. Preliminary numbers are addressed in this BCA. Actual numbers would be identified by detailed transition planning. The transfer would occur with CNO Staff and Navy Comptroller approval using established procedures.

## Resource Transfer to NWCF

- To Fully Leverage PWC Japan NWCF Capabilities (Option 4), Mission Funded Resources Dedicated to Utility Service Delivery Would Transfer from OMN to NWCF
- Actual Numbers Subject to Detailed Transition Planning in FY03/04
- Preliminary Projection for Transfer to NWCF:
  - \$681M (PRV) Mission Funded Utility Infrastructure
  - 52 Funded/Encumbered MLC Spaces
    - Atsugi (39), Kamiseya (4), Sasebo (8), Okinawa (1)
  - 1 USCS Funded/Encumbered FTE (Atsugi)
  - Estimated \$3M Support Equipment and Materials

**Reprogramming Within Existing Budgets.** To implement this initiative, both the Claimant and the Region would be required to reprogram within existing top line budgets for shore installation management. Preliminary numbers are addressed in this BCA. Actual reprogramming requirements would be identified after detailed transition planning. The Region would request reprogramming actions using established financial management procedures.

**Reprogramming PM to OB.** The following chart shows the proposed method to identify the correct level of mission funded property maintenance (PM) funds that would be reprogrammed to Other Base Operating Support (OB) funds.

NWCF utility rates are typically funded with Other BOS (OB) funds. NWCF rates include sustainment and recapitalization costs. Mission funded utility rates typically do not include sustainment and recapitalization costs. These costs are typically funded by property maintenance (PM) funding.

## Reprogramming PM to OB

- NWCF SRM for Utilities Included in Fully Burdened Rate, Funded by OB
- Mission Funded SRM for Utilities Funded by PM
- PM Funds Allocated for Mission Funded Utility Systems Should Be Proportionately Reprogrammed from PM to OB Accounts

Ratio of:  $\frac{\text{PM Funds Received (FY03) for Region}}{\text{Value of Region PRV Supported by PM}} = \frac{\$39,465\text{K}}{\$6,253,587\text{K}} = 0.00631$

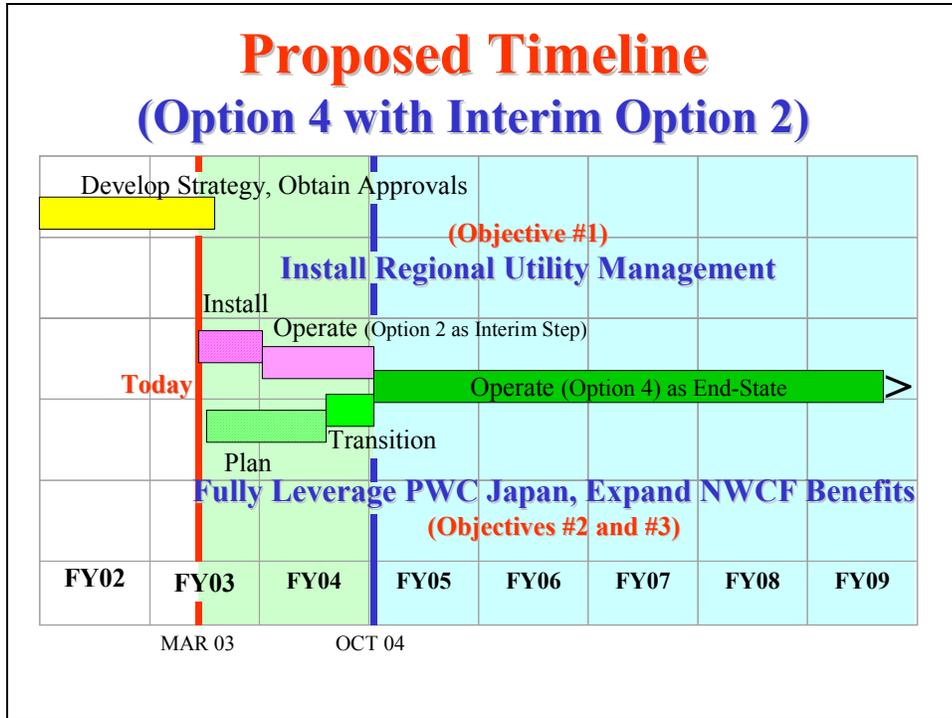
Value of Region MF Utility PRV x Ratio =  $\$680,897\text{K} \times 0.00631 = \$4,296\text{K}$

Based on FY03 PM Allocation,  
COMPACFLT Would Reprogram **\$4,296K** from PM to OB

In FY03 (current execution year), COMPACFLT funded the CNFJ Region at \$39,465K for PM funds to support over \$6.2B present replacement value (PRV) of infrastructure, or about 0.6% of PRV. Mission funded utility systems account for \$681K of PRV, so a proportionate allocation of PM funding would be \$4,296K. Therefore, COMPACFLT would reprogram this amount from PM over to OB to allow for fully costed NWCF rates.

## PART 6: TRANSITION PLAN

The chart below shows the macro components of the transition plan on a timeline. The top bar shows the effort that two-year effort that went into developing this specific strategic proposal. The next two bars show the interim Option 2 laying in beginning not later than October 2003. The lower three bars show the desired end-state Option 4 (full leverage of PWC Japan using NWCF financial model) in planning, transition, and operation by October 2004.



The following chart shows the macro steps for review and approval of this initiative.

**Transition Milestones.** The first step is to obtain COMPACFLT Staff support. A video teleconference was held on 19 February 2003 with RDML Crisp and CAPT Roth of CPF N46 to present the SUI in concept. Initial feedback was positive. CNFJ will submit a formal request to COMPACFLT soon request formal review and requesting support to move forward.

With COMPACFLT endorsement, the request will go COMNAVFACENGCOM for endorsement as the NWCF Budget Sponsoring Office (BSO). At this point assume NAVFAC would be informal dialog with FMB and DASN (Installations and Facilities). If support appears positive by mid-April 2003, PWC Japan can reflect the initiative in its FY05 budget submission, currently under development.

## Transition Milestones

CNFJ Direction to Evaluate NWCF Model	SEP 02
Implement Regional BL (RFMS Phase II)	OCT 02
Complete Business Case Analysis (BCA)	MAR 03
Obtain CPF N46/N80 Support (Claimant)	APR 03
Obtain NAVFAC NWCF Budget Support	APR 03
Begin Detailed Transition Planning	MAY 03
Obtain CNIC/FMB Budget Approval	OCT 03
Obtain OPNAV N413/N8 Approval	OCT 03
Begin NWCF Operations (all locations)	OCT 04

Assuming positive endorsement, PWC Japan would begin detailed transition planning in May, 2003. The following two charts show the major actions that would be performed, who would lead each effort, and the target completion date for each action.

## Required Transition Planning

- Plan to Fully Integrate Region Staff into NWCF Rate Development Process
  - Regional Engineer by 01 JUL 03
- Detailed Energy Conservation Management Plan
  - Utilities BLM by 31 JAN 04
- Detailed MEO for Entire Utilities Business Line
  - Utilities BLM by 01 MAR 04
- Future Year PWC Japan Rate Projections
  - Utilities BLM and PWC BM by 15 MAR 04
- Detailed Support Function Plan for All NWCF Locations
  - Deputy RE by 30 APR 04

**Continued....**

## **Required Transition Planning**

**...Continued**

- Detailed Utility System Readiness Assessment
  - Region Integrated Priority List for System Repairs and Recapitalization
    - Utilities BLM by 01 JUL 04
- Detailed Training Plan for Expanded Use of PWC Japan Business Processes and Tools
  - Utilities BLM and PWC BM by 01 AUG 04
- Specific Personnel Transition Plan for People in Impacted Positions
  - Deputy RE by 01 AUG 04

Transition planning is a cross-functional team effort, involving the Regional Engineer, the Regional Business Manager, the Regional Comptroller, the Regional Manpower Officer, and senior PWC Japan management.

**PART 7: APPENDIXES**

Appendix 1	CNFJ Strategic Plan 2000 (available at <a href="http://www.cnfj.navy.mil/regionalization">http://www.cnfj.navy.mil/regionalization</a> )
Appendix 2	CNFJ Regional Facility Management System Strategic Plan 2003-2006 (available at <a href="https://www.pwcyoko.navy.mil/Main/index.htm">https://www.pwcyoko.navy.mil/Main/index.htm</a> )
Appendix 3	Utilities Business Line Implementation Team Charter (available at <a href="https://www.pwcyoko.navy.mil/Main/index.htm">https://www.pwcyoko.navy.mil/Main/index.htm</a> )
Appendix 4	Utilities Business Line Implement Team Members
Appendix 5	Exemption from Utilities Privatization Requirement (available at <a href="https://www.pwcyoko.navy.mil/Main/index.htm">https://www.pwcyoko.navy.mil/Main/index.htm</a> )
Appendix 6	Schematic of FY01 Operating Result for Atsugi and Sasebo
Appendix 7	FY01 Electrical Consumption and Cost by Base and Customer
Appendix 8	Cost Study for Sasebo Utilities O&M Contract Conversion
Appendix 9	Current Task Matrix, NAF Atsugi (FY01)
Appendix 10	Current Task Matrix, CFA Sasebo (FY01)
Appendix 11	Utility System Operations and Maintenance Matrix, NAF Atsugi
Appendix 12	Utility System Operations and Maintenance Matrix, CFA Sasebo
Appendix 13	Non-utility Support of Utility Operations, NAF Atsugi
Appendix 14	Non-utility Support of Utility Operations, CFA Sasebo
Appendix 15	Sustainment and Recapitalization Opportunities, NAF Atsugi
Appendix 16	Sustainment and Recapitalization Opportunities, CFA Sasebo

## UTILITIES BUSINESS LINE IMPLEMENTATION TEAM MEMBERS

### PWC JAPAN

K. BLACKETT  
Y. FUKAWA  
K. HASHIMOTO  
K. KOCH, LT, CEC, USNR  
D. MURAIIDA  
A. QUATTLEBAUM, LCDR, CEC, USN  
S. ROUNDTREE  
P. WITHERSPOON  
M. YAMASHITA

### CNFJ

R. GERSH, LCDR, CEC, USN  
H. SHIMOKAWA

### ATSUGI

J. BROWN  
B. HICKS  
C. LORENZANA, LT, CEC, USNR  
D. KING, LCDR, CEC, USN  
W. SHEEDY, LCDR, CEC, USN

### SASEBO

D. BUSTAMANTE, LCDR, CEC, USN

### AD HOC MEMBERS

#### PWC JAPAN

T. HAGIWARA  
J. ISHII  
E. ISHIKAWA  
T. KIKUCHI  
M. NAGASHIGE  
S. SHIROGANE  
T. SUZUKI  
T. YASAKA

#### ATSUGI

Y. SHIBUYA  
A. TACHIKAWA

#### SASEBO

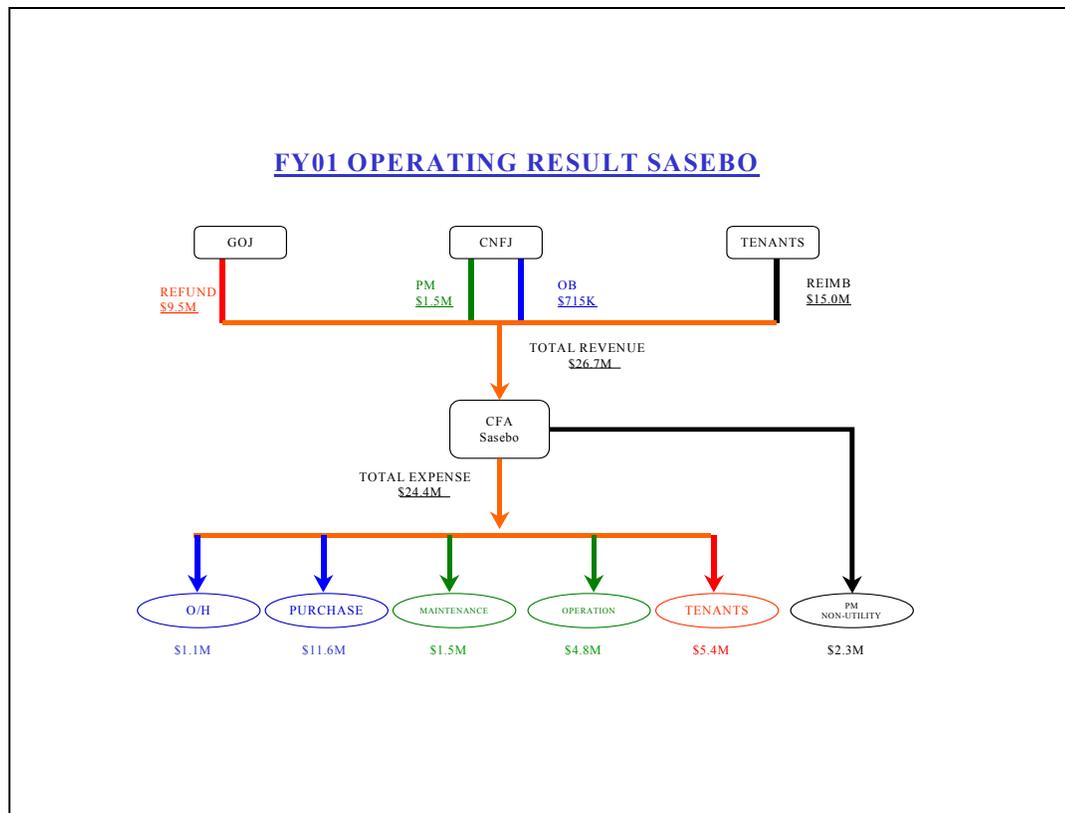
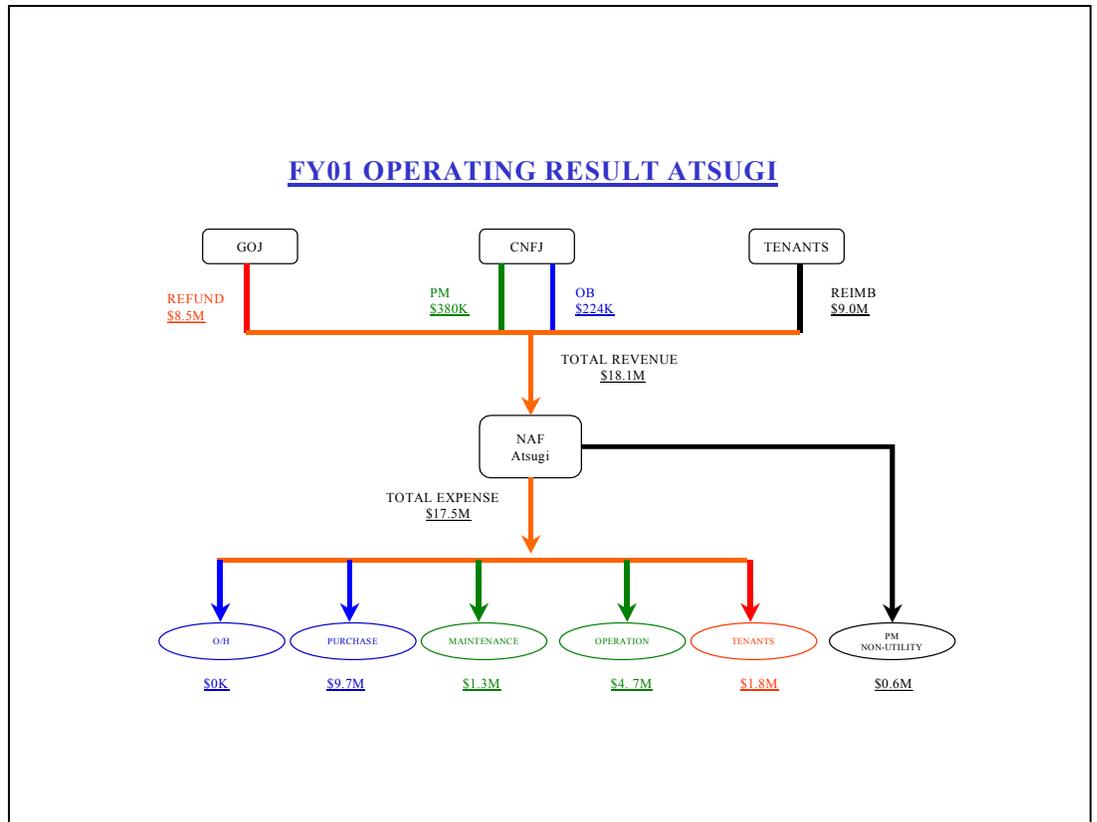
K. FUJITA  
K. KANDA  
A. KASAHARA  
T. TOKUNAGA

#### OKINAWA

E. MURRAY, LT, CEC, USNR

#### MISAWA

L. HOLKON, LT, CEC, USNR



**FY01 ELECTRICAL CONSUMPTION AND COST BY BASE AND CUSTOMER**

<u>Station</u>	Consumption (MWH)	Paid	UCS Refund	Net Cost	Unit Cost
Atsugi	47,539	\$2,336,828	\$4,264,381	(\$1,927,553)	(\$40.55)
Sasebo	18,496	\$2,141,000	\$3,113,403	(\$972,403)	(\$52.57)
Yokosuka	58,392	\$7,911,663	\$5,893,038	\$2,018,625	\$34.57
Total	124,427	\$12,389,491	\$13,270,822	(\$881,331)	
<b><u>Ships</u></b>					
Sasebo	21,040	\$3,454,181	\$1,843,636	\$1,610,545	\$76.55
Yokosuka	80,429	\$10,897,495	\$8,117,057	\$2,780,438	\$34.57
Total	101,469	\$14,351,676	\$9,960,693	\$4,390,983	
<b><u>SRF</u></b>					
Sasebo	11,221	\$2,246,179	\$860,746	\$1,385,433	\$123.47
Yokosuka	14,565	\$1,973,436	\$1,469,929	\$503,507	\$34.57
Total	25,786	\$4,219,615	\$2,330,675	\$1,888,940	
<b><u>JMSDF</u></b>					
Atsugi	15,547	\$3,245,489	\$0	\$3,245,489	\$208.75
Sasebo	5,088	\$1,028,147	\$0	\$1,028,147	\$202.07
Yokosuka	10,231	\$1,969,534	\$0	\$1,969,534	\$192.51
Total	30,866	\$6,243,170	\$0	\$6,243,170	
<b><u>Other</u></b>					
Atsugi	3,970	\$828,585	\$248,778	\$579,807	\$146.05
Sasebo	6,052	\$1,202,282	\$808,985	\$393,297	\$64.99
Yokosuka	25,863	\$3,504,240	\$2,610,146	\$894,094	\$34.57
Total	35,885	\$5,535,107	\$3,667,909	\$1,867,198	
<b><u>Housing</u></b>					
Atsugi	14,613	\$2,966,842	\$1,168,698	\$1,798,144	\$123.05
Sasebo	9,670	\$1,587,526	\$858,663	\$728,863	\$75.37
Yokosuka	40,420	\$5,476,599	\$4,079,268	\$1,397,331	\$34.57
Total	64,703	\$10,030,967	\$6,106,629	\$3,924,338	
<b>TOTALS</b>					
Atsugi	81,669	\$9,377,744	\$5,681,857	\$3,695,887	
Sasebo	71,567	\$11,659,315	\$7,485,433	\$4,173,882	
Yokosuka	229,900	\$31,732,967	\$22,169,438	\$9,563,529	
Grand Total	383,136	\$52,770,026	\$35,336,728	\$17,433,298	

**COST STUDY FOR SASEBO UTILITIES O&M CONTRACT CONVERSION**

	Labor Hour/Cost			Material	Other	Total Cost
	Straight	Overtime	Total			
<b>NO. OF EMPLOYEES</b>						
Overhead (Admin. & Management)						4
Electrical Section						23
Mechanical Section						49
Total:						76
<b>LABOR HOUR</b>						
Overhead Labor	7,040	384	7,424			
Direct Labor	126,720	19,860	146,580			
Total:	133,760	20,244	154,004			
<b>OVERHEAD COST (Excludes Labor Cost)</b>						
Telephone Cost					4,200	4,200
Utilities Cost					30,200	30,200
Material & Supplies				12,900		12,900
Equipment Rental					9,800	9,800
Maintenance & Repair to Grounds					600	600
Repair of Office Furniture & Equip					100	100
M&R of Shop Equipment					900	900
Emergency Service for Overhead Category					1,300	1,300
Travel Cost					1,500	1,500
Training					15,000	15,000
Printing Cost					4,400	4,400
Safety Costs				500	800	1,300
ADP Support Costs				12,600		12,600
Other Overhead Cost					600	600
Total Overhead (Excludes Labor)				26,000	69,400	95,400
<b>LABOR COST (with GOJ Refund)</b>						
Overhead Labor	10,585	10,104	20,689			20,689

CNFJ Strategic Utilities Initiative

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Direct Labor	161,630	442,692	604,322			604,322
Total Labor Cost:	172,215	452,796	625,011			625,011
<b>LABOR COST (without GOJ Refund)</b>						
Overhead Labor	176,412	10,104	186,516			186,516
Direct Labor	2,693,831	442,692	3,136,523			3,136,523
Total Labor Cost:	2,870,243	452,796	3,323,039			3,323,039
	Labor Hour/Cost					Total
	Straight	Overtime	Total	Material	Other	Cost
<b>OTHER COST</b>						
Applied Overhead (\$2.73/1hr of D/L)					400,163	400,163
Minor Maintenance Cost					150,000	150,000
<b>TOTAL COST (with GOJ Refund)</b>	172,215	452,796	625,011	26,000	619,563	1,270,574
<b>vs. Current O&amp;M Contract (\$1,801,000)</b>						-530,426
<b>TOTAL COST (without GOJ Refund)</b>	2,870,243	452,796	3,323,039	26,000	619,563	3,968,602
<b>Vs. Current O&amp;M Contract (\$1,801,000)</b>						2,167,602

Remarks:

Current O&M Contract Cost: \$1,801,000 (Operation Contract = \$1,731,000)

**Estimated Annual Work Hours per Employee:**

	<u>Straight</u>	<u>Overtime</u>
Overhead – 40Hrs/Week Workers	1,760	96
Direct Shift – 24hrs Shift, 40Hrs/Week Workers	1,760	340
Direct Day work – 40Hrs/Week Workers	1,760	200

MLC Labor Shortfall (for Straight Labor): 6.0%

## Current Task Matrix - Atsugi

UTILITIES TASK DESCRIPTION	PERFORMED BY (Manpower)								
	Util Div	Maint Div	FMED	Eng. Div	Admin Div	Con- tractor	Other	Kami- seya	Line Total
<b>General Management</b>									
General Supervision	1.2	0	0	0	0	0	0	0.6	1.8
General Admin	0.6	0	0	0	0.2	0	0	0.2	1
Plant O&M Management	1.2	0	0	0	0	0	0	1	2.2
<b>Reports</b>									
UCAR/DUERS/EAR, etc	0.2	0	0	0	0	0	0	0.1	0.3
Other Reports	0.1	0	0	0	0	0	0	0.1	0.2
<b>Billing</b>									
Allocation	0.2	0	0	0	0	0	0	0.05	0.25
Tally Prep/Submit	0	0	0	0	0.1	0	0	0	0.1
<b>Budget</b>									
Data Collection	0.2	0	0.1	0	0.2	0	0	0.05	0.55
Budget Preparation	0	0	0	0	0.5	0	0	0	0.5
Budget Review	0	0	0	0	0.2	0	0	0	0.2
<b>Financial Mgmt</b>									
Analysis	0	0	0	0	0.25	0	0	0	0.25
Accounting							2		2
<b>Procurement</b>									
Utility Invoice	0	0	0	0	0.1	0	0	0	0.1
UP Contract Mgmt	0.1	0	0	0	0	0	0	0.05	0.15
UPA Reporting	0	0	0	0	0	0	0	0	0
Fuel Receiving Schedule	0.1	0	0	0	0	0	0	0.05	0.15
Fuel Order/Data Mgmt	0.1	0	0	0	0.15	0	0	0.05	0.3
Material Procurement	0	0	0	0	0.3	0	0	0	0.3
<b>Utilities Engineering</b>									
Project Basic Plan/Submission	0.1	0.05	0.8	0	0	0	0	0.05	1
Standing/Recurring J/O	0	0	0.3	0	0	0	0	0	0.3
MRP/LRMP Mgmt	0.05	0.05	0.7	0	0	0	0	0	0.8

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E/S, Minor Management	0.05	0	0	0	0	0	0	0	0.05
JFIP Basic Plan	0.05	0	0	0.6	0	0	0	0	0.65
JFIP Review/Coordination	0	0	0	0.5	0	0	0	0	0.5
UTILITIES TASK DESCRIPTION	PERFORMED BY (Manpower)								
	Util Div	Maint Div	FMED	Eng. Div	Admin Div	Con-tractor	Other	Kami-seya	Line Total
MILCON/SP Project Mgmt	0.05	0	0	0.1	0	0	0	0	0.15
Drawing Mgmt	0	0	0	0.5	0	0	0	0	0.5
Outage Coordination	1	0	0	0	0	0	0	0.2	1.2
QAE	0	0	0.1	0	0	0	0	0	0.1
Environmental Compliance	0.1	0	0	0	0	0	0.3	0.05	0.45
Contingency Planning	0.2	0	0	0	0	0	0	0.05	0.25
<b>Energy Management</b>									
Awareness	0.1	0	0	0	0	0	0	0	0.1
Technical	0.05	0	0	0	0	0	0	0	0.05
<b>System Operation</b>									
Utility Plant	23.5	0	0	0	0	0	0	4	27.5
Utility Distribution	0	2	0	0	0	0	0	2.4	4.4
Field/Emergency Response	0.7	0.5	0	0	0	0	0	0.45	1.65
Meter Reading	0.5	0	0	0	0	0	0	0.05	0.55
Fuel Receive Ops	0.1	0	0	0	0	0	0	0.05	0.15
Hotel Service	0	0	0	0	0	0	0	0	0
<b>Maintenance &amp; Repair</b>									
Daily M&R for Plants	7	0	0	0	0	0	0	0.8	7.8
Daily M&R for Dist Sys	0	2	0	0	0	0	0	0.5	2.5
PMI for Plants	0.5	0	0	0	0	0.2	0	0.1	0.8
PMI for Dist Sys	0	16	0	0	0	0.1	0	0.3	16.4
Overhauls	1.5	0.5	0	0	0	0	0	0.3	2.3
<b>TOTAL</b>	<b>39.55</b>	<b>21.1</b>	<b>2</b>	<b>1.7</b>	<b>2</b>	<b>0.3</b>	<b>2.3</b>	<b>11.55</b>	<b>80.5</b>

Remarks

- General Supervision: Performed by Division Director and Utility Quartermen.
- General Admin: Includes admin support for employees.
- Plant O&M Management: Performed by Utility Quartermen and plant Foreman B.
- Environmental Compliance: Administered by Environmental Division.

**Current Task Matrix - Sasebo**

UTILITIES TASK DESCRIPTION	PERFORMED BY (Manpower)							
	Util Br	Fac. Div/ Prod. Br	FMEB	Eng. Div	Fiscal Admin Div	Con- tractor	Other	Line Total
<b>General Management</b>								
General Supervision	1	0.5	0	0	0	0	0	1.5
General Admin	0.8	0	0	0	0.1	2	0	2.9
Plant O&M Management	0.5	0	0	0	0	1	0	1.5
<b>Reports</b>								
UCAR/DUERS/EAR, etc	0.4	0	0	0	0.1	0	0	0.5
Other Reports	0.2	0	0	0	0	0	0	0.2
<b>Billing</b>								
Allocation	0	0	0	0	0	0.3	0	0.3
Tally Prep/Submit	0.1	0	0	0	0	0.2	0	0.3
<b>Budget</b>								
Data Collection	0.2	0	0.1	0	0.2	0	0	0.5
Budget Preparation	0	0	0	0	0.5	0	0	0.5
Budget Review	0	0	0	0	0.2	0	0	0.2
<b>Financial Management</b>								
Analysis	0	0	0	0	0.2	0	0	0.2
Accounting							0.7	0.7
<b>Procurement</b>								
Utility Invoice	0.2	0	0	0	0	0	0	0.2
UP Contract Mgmt	0.1	0	0	0	0	0	0	0.1
UPA Reporting	0	0	0	0	0	0	0.1	0.1
Fuel Receiving Schedule	0	0	0	0	0	0.1	0	0.1
Fuel Order/Data Mgmt	0	0	0.2	0	0	0.1	0	0.3
Material Procurement	0	0	0.4	0	0	0	0	0.4
<b>Utilities Engineering</b>								
Project Plan/Submission	1	0.1	0.5	0	0	0	0	1.6
Standing/Recurring J/O	0	0	0.3	0	0	0	0	0.3
MRP/LRMP Mgmt	0.15	0	0.9	0	0	0	0	1.05

E/S, Minor Management	0	0	0.2	0	0	0	0	0.2
JFIP Basic Plan	0.25	0	0	0.8	0	0	0	1.05
UTILITIES TASK DESCRIPTION	PERFORMED BY (Manpower)							
	Util Br	Fac. Div/ Prod. Br	FMEB	Eng. Div	Fiscal Admin Div	Con- tractor	Other	Line Total
JFIP Review/Coordination	0	0	0	0.7	0	0	0	0.7
MILCON/SP Project Mgmt	0.1	0	0.1	0.3	0	0	0	0.5
Drawing Mgmt	0	0	0	0.6	0	0	0	0.6
Outage Coordination	0.7	0	0	0	0	0	0	0.7
QAE	0.9	0	0	0	0	0	0	0.9
Environmental Compliance	0.1	0	0	0	0	0.2	0.2	0.5
Contingency Planning	0.2	0	0	0	0	0.1	0	0.3
EMCS Support	0	1	0	0	0	0	0	1
<b>Energy Management</b>								
Awareness	0	0	0	0	0	0	0.1	0.1
Technical	0.1	0	0	0.1	0	0	0.2	0.4
<b>System Operation</b>								
Utility Plant	0	0	0	0	0	35	0	35
Utility Distribution	0	2	0	0	0	0	0	1
Field/Emergency Response	0	1.5	0	0	0	2.5	0	4
Meter Reading	0	0	0	0	0	2	0	2
Fuel Receive Ops	0	0	0	0	0	0.3	0	0.3
Hotel Service	0	0	0	0	0	6	0	6
<b>Maintenance &amp; Repair</b>								
Daily M&R for Plants	0	0.5	0	0	0	4	0	4.5
Daily M&R for Dist Sys	0	10	0	0	0	2	0	13
PMI for Plants	0	0	0	0	0	2	0	2
PMI for Dist Sys	0	1.5	0	0	0	1.5	0	3
Overhauls	0	0.5	0	0	0	2.7	0	3.2
<b>TOTAL</b>	<b>7</b>	<b>17.6</b>	<b>2.7</b>	<b>2.5</b>	<b>1.3</b>	<b>62</b>	<b>1.3</b>	<b>94.4</b>

Remarks

- General Supervision: Performed by Facility Div Head and Utility Branch Head.
- General Admin: Includes general admin, support for employees.
- Plant O&M Management: Performed by (4) four Utilities Operation Specialists.
- UCAR: Generated by CFAS Logistics Department (Comptroller).
- EAR: Administered by Environmental Division.
- UPA Reporting: Performed by CFAS Logistics Department.
- Material Procurement: Carried out by Material Control & Procurement Section.

- Environmental Compliance: Planned and performed by Contractor and Environmental Division.
- Energy Management: Conducted by Assistant Public Works Officer, CFAS Energy Manager, Engineering Div Director, Facilities Div Head, etc.

**UTILITY SYSTEM OPERATION AND MAINTENANCE MATRIX -- ATSUGI**

SYSTEM	Operation			Maintenance		
	Utility Division	Maintenance Division	Contractor	Utility Division	Maintenance Division	Contractor
<b>Electrical</b>						
Substation	X					X
Distribution		X			X	X
<b>Steam</b>						
Steam generation	X			X		
Distribution		X				
<b>Water</b>						
Water Plants	X			X	X	
Distribution		X			X	
<b>Sewage</b>						
Sewage Plants	X			X	X	
Distribution					X	
<b>CATV</b>						
Head End			X			X
Distribution			X			X
<b>Swimming Pools</b>	X			X	X	X

**UTILITY SYSTEM OPERATION AND MAINTENANCE MATRIX --SASEBO**

SYSTEM	Operation			Maintenance			
	Utilities Branch	Maintenance Division	Util. O&M Contractor	Utilities Branch	Maintenance Division	Util. O&M Contractor	Contractor (One-Time)
<b>Electrical</b>							
Substation	X		X	X		X	X
Distribution		X			X		X
<b>Steam</b>							
Steam Generation	X		X	X	X	X	X
Distribution		X	X		X		
<b>Water</b>							
Water Plants	X	X	X		X		X
Distribution		X			X		X
<b>Sewage</b>							
Sewage Plants	X		X	X	X	X	X
Distribution		X			X		
<b>CATV</b>							
Head End		X			X		
Distribution		X			X		
<b>Swimming Pools</b>							
	X		X	X	X	X	
<b>Compressed Air</b>							
Air Plants	X		X	X		X	X
Distribution		X			X		X
<b>Salt-Water</b>							
Pumping Plants	X		X	X		X	X
Distribution		X			X		X
<b>Feed Water</b>							
Demineralizer Plant	X		X	X	X	X	X
Distribution			X	X	X	X	

## UTILITY WORK BY OTHER IN-HOUSE RESOURCES - ATSUGI

Atsugi Utilities Division receives utility-related services from other public works divisions. Summarized list as follows. Under Alternative - 1, additional manpower allocation or billet transfer to the Utilities Division will be considered to meet the management and O&M requirements.

	ManYear	Services Provided
Maintenance Div.	21.1	Utility distribution operation, Field response, PMI for plant/distribution system, Daily maintenance for plant/distribution system, etc.
FMED	2	SRM project basic plan, SRM/LRMP management, QAE, etc.
Engineering Div.	1.7	JFIP/MCON/SP project basic plan/ review/ coordination/ management, As-built drawing, etc.
Admin Div / Comptroller Dept	4	Administrative, Budget, Billing, Utility purchase, Fuel ordering, Material procurement, Accounting, etc.
Other Div.	0.3	Environmental compliance support
Kamiseya	11.55	Utility plant/distribution O&M, Field response, Daily maintenance, Utility management, etc.
Total:	40.65	

## UTILITY WORK BY OTHER IN-HOUSE RESOURCES - SASEBO

Sasebo Utilities Branch receives utility-related services from other public works divisions/branches. Summarized list as follows. Under Alternative - 1, additional manpower allocation or billet transfer to the Utilities Division will be considered to meet the management and O&M requirements.

	ManYear	Services Provided
Production Branch	17.6	Utility distribution operation, Field response, PMI for distribution system, Daily maintenance for distribution, Overhaul, etc.
FMEB	2.7	SRM project basic plan, Standing J/O, SRM & LRMP management, Fuel/Material ordering, etc.
Engineering Div.	2.5	JFIP/MCON/SP project basic plan/ review/ coordination/ management, As-built drawing, etc.
Fiscal/Admin Div./ Logistics Dept	2	Administrative, Budget, Financial Analysis, Accounting, etc.
Others	0.6	Environmental compliance, Energy management, Other reporting, etc.
Total:	25.4	

## RECAPITALIZATION OPPORTUNITIES -- ATSUGI

### UTILITY SYSTEMS:

1. **50Hz Feeder Voltage:** There are two different 50Hz high-voltage distribution grids, 13.8KV and 6.6KV. Unified 6.6KV feeder (6.6KV) will be considered for more effective operation and maintenance.
2. **Electrical Distribution Systems:** Existing system is not looped. Looped distribution system will be considered to minimize affected areas and restoration time in case of power outage.
3. **Frequency Converters:** Two frequency converters in building 201 are not designed to operate simultaneously. Synchronized capability of them will be considered to avoid 60Hz power interruption for the system maintenance.
4. **Deep Well:** There are five deep wells constructed during 1953-1996. Old wells will be considered to upgrade.
5. **Frequency Converters (Kamiseya):** Four frequency converters (installed in 1968) in building 192 are deteriorated. Installation of new static-type frequency converters to the 60Hz demanding facilities will be considered to minimize O&M costs.
6. **Utility System (Kamiseya):** Utility systems are thoroughly old and deteriorated, except high-voltage receiving system. The system upgrade will be considered.

### PLANT O&M:

1. **Utility Plant Operation:** Remote Monitoring & Control System will be considered for steam, water, sewage and some of electrical plants to save manpower for the operation.
2. **Utility Distribution, Operation and PMI:** Maintenance Division mainly performs operation and PMI of the utility distribution systems. Transfer/addition of operation/PMI crews will be considered to have improved PMI program and thorough utilities O&M responsibility.
3. **Utility Plant Operation (Kamiseya):** Remote Monitoring & Control will also be considered for utility plant operation. If not, additional manpower will have to be considered for boiler plant operation to meet the regulation.
4. **Utility Distribution, Operation and PMI (Kamiseya):** Public Works, Kamiseya currently performs operation and PMI of the utility distribution systems. Transfer/addition of PMI/operation crews will be considered to have improved PMI program and thorough utilities O&M responsibilities.

### UTILITY MANAGEMENT:

1. **Financial Management/Admin Work:** Administrative Division currently performs financial management and admin work for Utilities Division. Billet transfer to Utilities Division will be considered for improved financial management and administrative work.
2. **Engineering Service:** Facilities Maintenance Engineering Division (FMED) currently performs most of engineering services for Utilities Division. Billet transfer to Utilities Division will be considered for improved engineering services.

## RECAPITALIZATION OPPORTUNITIES -- SASEBO

### UTILITY SYSTEMS:

1. **Electrical Distribution Systems:** Existing systems are not looped, except Hario Housing area. Looped distribution system will be considered to minimize affected areas and restoration time in case of power outage.
2. **Electrical System (Maebata, Hario, Shima Ammo areas):** Existing overhead distribution systems are deteriorated. Upgrade of the systems will be considered.
3. **Stem Distribution Systems:** Existing distribution systems are deteriorated and not looped. Upgrade to looped system will be considered at the main base.
4. **Water Distribution System (Main base):** Water is directly distributed through City Water Main. Installation of reservoir will be considered for disaster preparedness.
5. **Water Distribution System (Hario housing):** Existing chlorine and fluoride injection systems are not in use. Revitalize of the system will be considered to meet JEGS requirements.

### PLANT O&M:

1. **Utility Distribution, Operation and PMI:** Production Branch and contractor currently perform operation and PMI of the utility distribution systems. Transfer/addition of operation/PMI crews will be considered to have improved PMI program and thorough utilities O&M responsibility.

### UTILITY MANAGEMENT:

1. **Financial Management/Admin Work:** Fiscal/Admin Division currently performs financial management and admin work for Utilities Branch. Billet transfer to Utilities Branch will be considered for improved financial management and administrative work.
2. **Engineering Service:** Engineering Division and Facilities Management Branch currently provide engineering services for Utilities Branch. Billet transfer to Utilities Branch will be considered for improved engineering services.